



# **Most Appropriate Accessions - introduction**

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# AEGIS and the European Collection – i.e. **the context**



- For AEGIS the so-called **European Collection** is the major output; the following are the **key elements**:
- **Process** to identify accessions agreed (using so-called **selection requirements and criteria**)
- European Accessions need to comply with all requirements!
- **Selection criteria** to identify MAAs have been discussed for the model crops, are crop specific and provide guidance to select most appropriate accessions among set of (quasi) duplicates
- Important role of **countries and of WGs** in process
- Some **experience** with model crops gained
- Non-availability of **adequate information** could be a bottleneck in process

# Current status



- Main players are countries and Crop Working Groups
- Identification process has been applied by all model crops
- There are no definite procedures fixed
- Selection requirements have been approved by the Steering Committee
- The selection criteria have been discussed by the model crop groups, without much divergence of opinion
- As foreseen in the process a WG agreement for each crop or crop group will be required
- Some additional selection criteria are suggested as a guide to countries when selecting MAAs

# Selection requirements



- **Selection requirements** for identification of European Accessions agreed by SC during its 11<sup>th</sup> Meeting:
  1. Material **under the management and control of the governments** of member countries and their associate members, in the **public domain** and **offered by the associate members** for inclusion into AEGIS
  2. **Genetically unique within AEGIS**, to the best available knowledge (i.e. genetically distinct accessions; assessment based on available data and/or on the recorded history of the accession)
  3. **Plant genetic resources for food and agriculture** as defined in the International Treaty as well as medicinal and ornamental species
  4. **European origin or introduced germplasm** that is of **actual or potential importance to Europe** (for breeding, research, education or for historical and cultural reasons).

# Selection criteria - 1



- A. Agreed by **each WG** for their specific crop(s)
- B. Not** fully discriminative
- C. Used when deciding **which accession to accept** among two or more “quasi duplicate” or similar accessions;
- D. WGs** to decide if any of these considerations has **prevalence** over the others, or that the selection should be the result of a **combination of two or more** secondary criteria

# Selection criteria - 2



1. Maintained in “country of origin”
2. A known origin (collected and/or bred; pedigree data!?)
3. Comprehensiveness of passport information
4. Number of regeneration/multiplication cycles (Do we know?)
5. Health status (i.e. is the germplasm disease free?)
6. Existence of morphological/molecular characterization data

# Selection criteria - 3



7. Existence of (agronomical) **evaluation data**
8. **Validated accession name** (particularly relevant for perennial clonal crops where the same name can be attributed to different accessions; history of individual accessions is important; special attention to be paid to synonyms and homonyms)
9. **Adequate management procedures followed?**



# “Additional” selection criteria - 1



## Discussed during Cereals Network meeting:

1. Accessions that have been collected or bred in the country where they are being conserved in one of its genebanks
2. Accessions of the crop genepool in question that are crop wild relatives
3. Germplasm accessions that are traditional varieties and/or landraces
4. Germplasm accessions that represent old and/or obsolete varieties

# “Additional” selection criteria - 2



5. Modern varieties, bred with conventional methods
6. Accessions that are breeding lines
7. Genetic stocks of the crop gene pool in question
8. Accessions that consist of research material like mapping populations, mutants, etc. – if different from 7 above

# Summary of the MAAs identification process



1. To develop **crop specific selection criteria** for identification of the Most Appropriate Accessions (MAAs) and develop/agree **process** of identifying MAAs.
2. **Selection of “candidate” accessions at the National level**, using the selection requirements, selection criteria and the agreed "process".
3. **Analyse** the list of all **candidate accessions** of a given crop proposed by countries to arrive at **list of MAA** per crop to be included in the European Collection.

# Summary of the MAA identification process



4. Inform National Coordinators for **flagging these European Accessions** in EURISCO
- To facilitate identification of MAAs it is foreseen in EUROGENEBANK Project to:  
**Develop an “European Accession Selector”, a web-based IT interface to EURISCO for the selection and designation process of European Accessions per crop, both on the national and European level.**

# Proposed follow-up action



1. Proceed with identification of selection criteria
2. Strive to ensure that missing data are provided to EURISCO
3. Respective WGs to “adopt” the process of identifying MAAs at national level for a given crop or crop group
4. Assist countries (and their institutions) to make the various “offers” of candidate accessions
5. Develop crop (genepool) specific list of MAAs on the basis of the offered accessions (using the selection criteria), incl. any additional accessions as suggestions
6. Establish the European Collection for a given crop genepool and inform National Coordinators
7. When QMS and technical/operational standards are defined a potential last and future step to “certify” European Accessions may be needed

# An additional point



- As a possible additional future step and based on the
  - a. Agreed minimum **technical and operational standards**,
  - b. The established **quality management system**, including
  - c. the process to derive at "**certified European Accessions**"the respective Working Group might agree on (**certified**) European Accessions that meet all these requirements
- However, the potential certification approach (of accessions, genebanks, genebank operations, ??) needs further discussion by the **Steering Committee**

# Steps ahead in making AEGIS operational



## Proposed responsibilities of Crop WGs:

1. Establish **criteria** for Most Appropriate Accessions
2. Establish **draft list of European Accessions**
3. **Oversee process to identify European Accessions** that will form the European Collection, incl. **sharing information** on identified accessions with respective National Coordinators as suggestions for “designation”
4. Draft and agree on **crop specific technical standards** and assess applicability of **generic management standards**
5. Prepare/coordinate implementation of **conservation action plan**
6. Improve **data quality** and **coverage** of European accessions
7. **Survey institutes** (i.e. capacities and availability)



Thank you  
for your  
attention!

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