



ECPGR Phase X

Lorenzo Maggioni (ECPGR Secretariat)

Triticum species workshop, 17 September 2019, Piestany, Slovakia

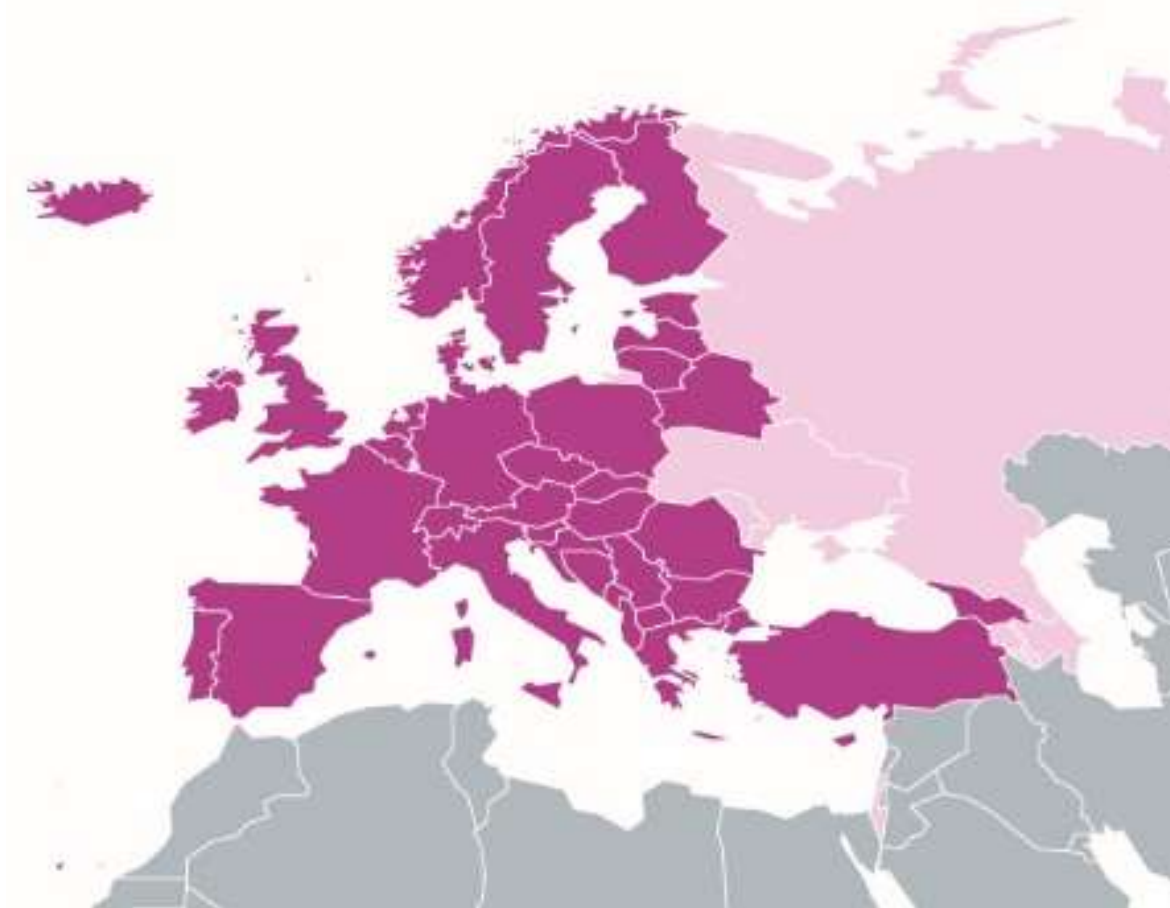
T. polonicum

ECPGR long-term goal

Stakeholders in Europe collaboratively,
rationally and effectively **conserve ex situ and
in situ PGRFA**, provide **access** and increase
sustainable **use**

www.ecpgr.cgiar.org

A European Network



Ten Phases (1980-2023)

- Member countries contribute funding (ca. € 540 000 per year)
- Use of funds:
 - Coordination
 - Working Group activities
 - Maintenance of EURISCO

Objectives of ECPGR Phase X (2019–2023)

1. To efficiently conserve and provide access to unique germplasm in Europe through **AEGIS** and the **European Collection**
2. To provide passport and phenotypic information of actively conserved European PGRFA diversity *ex situ* and *in situ* through the **EURISCO** catalogue
3. To improve *in situ* conservation and use of **crop wild relatives**
4. To promote **on-farm** conservation and management of European PGRFA diversity
5. To promote **use** of PGRFA

Structure



Wheat Working Group



Chair: François Balfourier

✉ francois.balfourier@inra.fr

Confirmed as Chair for Phase X until 2020

[View CV](#)

Previous Chairs

Gert Kleijer (Until 5 May 2012)

Grant Scheme Activities

- Sixth Call (2018)** • Training on identification of botanical varieties in *Triticum* species (Training in *Triticum* species: TTS)
- Third Call (2016)** • Identification and updating data of eligible AEGIS accessions in both wheat and rye species (TRISECA)
- First Call (2014)** • *Triticum* in AEGIS: Identification and Documentation (TRAID)

84 ECPGR Wheat Working Group Members

[✉ Email Distribution List](#)

Chair: François Balfourier ✉ francois.balfourier@inra.fr

[Full list](#)

Genebank Curator (29)

Crop specialist (28)

Information/Documentation (15)

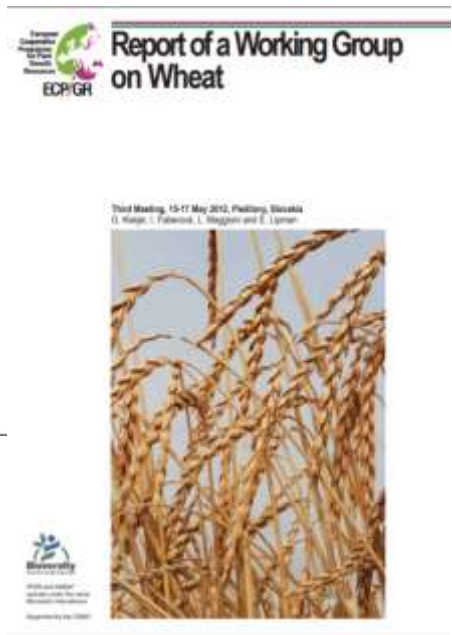
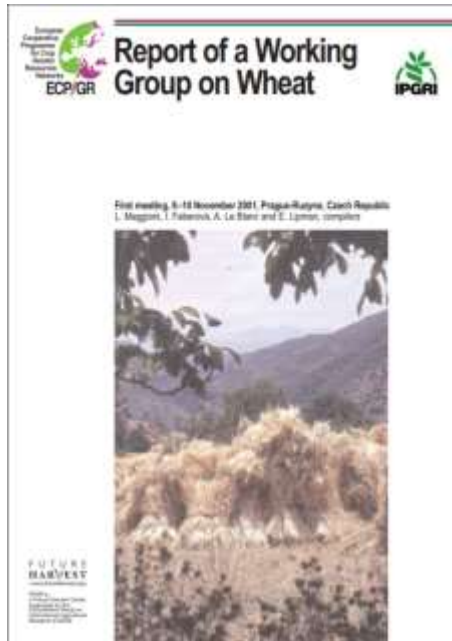
Plant breeder (21)

Policy and law (9)

Other expertise (4)

Contact Persons (7)

Working group meetings



ECPGR Mode of Operation of Phase X

- Two budget lines of similar amounts:
 1. Meetings
 2. Other activities



*A European Genebank
Integrated System*

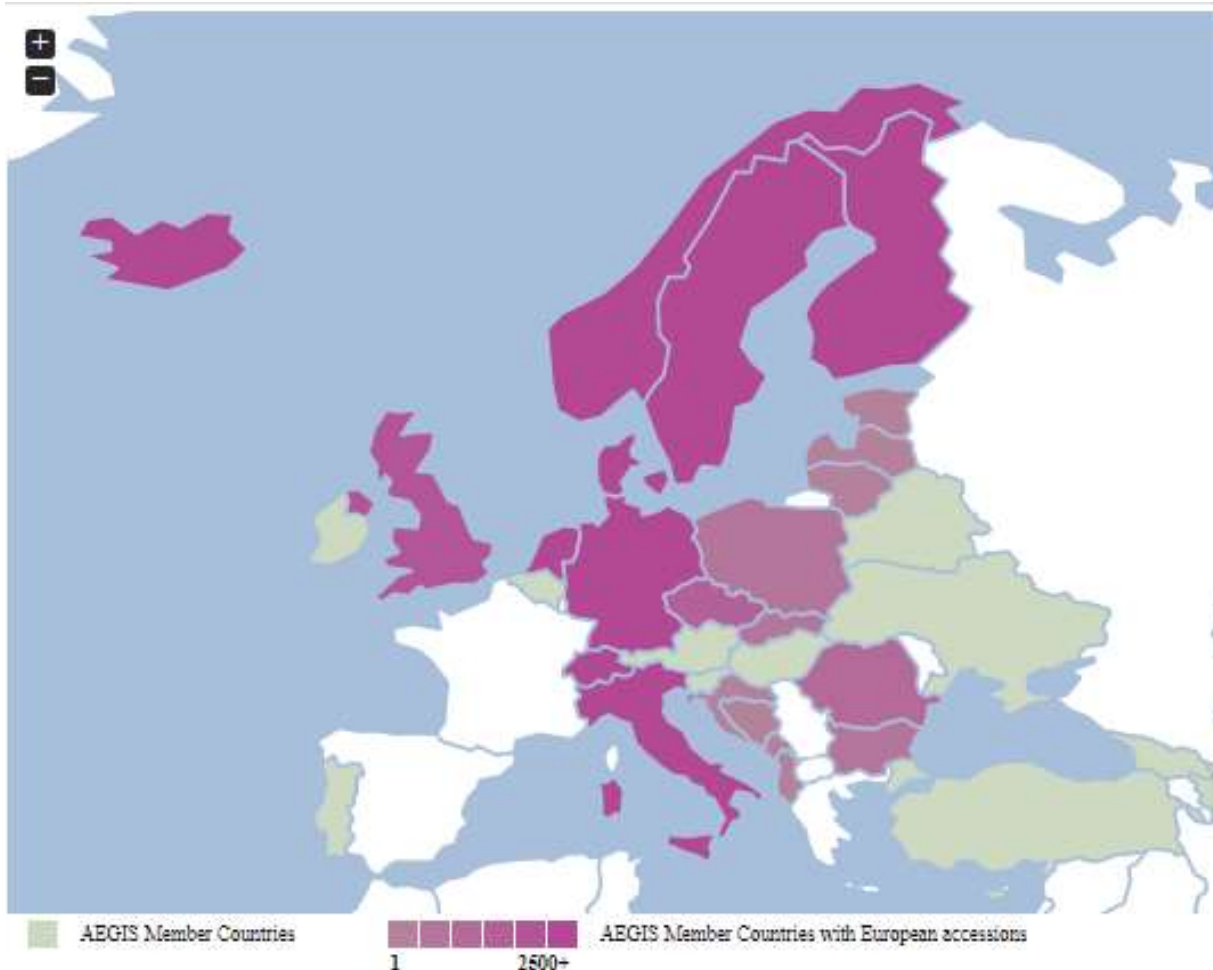


AEGIS objective

Conserving in a **collaborative way** and at **agreed quality standards**, the **genetically unique** and important accessions for Europe of **all crops** and making them **available** for breeding and research **through SMTAs**

The European Collection

Total number of European Accessions: **57 034** (September 2019)



Country	No of accessions
Albania	8
Bulgaria	341
Bosnia and Herz.	22
Croatia	90
Czechia	1636
Estonia	126
Germany	26841
Italy	8608
Latvia	27
Lithuania	45
Montenegro	31
Netherlands	5845
Nordic Countries	4779
Poland	443
Romania	623
Slovakia	299
Switzerland	5611
United Kingdom	1659
Total	57 034

Wheat accessions in AEGIS

Triticum (6784) ×

Triticum	24	Netherlands (23), Poland (1)
Triticum aestivum	4126	Bulgaria (135), Czech Republic (417), Estonia (16), Latvia (9), Montenegro (6), Netherlands (605), Nordic Countries (247), Poland (150), Romania (129), Slovakia (242), Switzerland (2170)
Triticum boeoticum	1	Slovakia (1)
Triticum compactum	2	Switzerland (2)
Triticum dicoccon	27	Bulgaria (26), Switzerland (1)
Triticum dicoccum	25	Montenegro (20), Slovakia (1), Switzerland (4)
Triticum durum	152	Bulgaria (126), Poland (1), Slovakia (3), Switzerland (22)
Triticum monococcum	82	Bulgaria (32), Czech Republic (3), Nordic Countries (1), Romania (43), Switzerland (3)
Triticum spelta	2266	Bulgaria (7), Switzerland (2259)
Triticum squarrosum	5	Netherlands (5)
Triticum timopheevii	2	Romania (2)
Triticum triunciale	4	Netherlands (4)
Triticum turgidum	68	Czech Republic (54), Netherlands (2), Nordic Countries (1), Romania (10), Switzerland (1)

Crop-specific standards for conservation – based on FAO

CROP-SPECIFIC GENE BANK STANDARDS FOR ORTHODOX SEEDS

Agreed by the Wheat Working Group

January 2016

Note: the “FAO Genebank standards for orthodox seeds” listed in the first column correspond to Chapter 4, pp. 17-63 in: FAO. 2014. Genebank Standards for Plant Genetic Resources for Food and Agriculture. Rev. ed. Rome. (www.fao.org/docrep/019/i3704e/i3704e.pdf)

FAO Genebank standards for orthodox seeds	Crop-specific genebank standards for orthodox seeds – Wheat gene pools (<i>Triticum</i> , <i>Aegilops</i> , <i>Secale</i> , <i>XTriticosecale</i>) <i>No comment in this column means agreement with FAO standard</i>	Remarks (reasons for deviating from FAO standards)
4.1 Standards for acquisition of germplasm		
4.1.1 All seed samples added to the genebank collection have been acquired legally with relevant technical documentation.	All seed samples recently added to the genebank collection have been acquired legally with relevant technical documentation.	This information is not always available for accessions received a long time ago. It depends on the update on the history of introduction.
4.1.2 Seed collecting should be made as close as possible to the time of maturation and prior to natural seed dispersal, avoiding potential genetic contamination, to ensure maximum seed quality.		
4.1.3 To maximize seed quality, the period between seed collecting and transfer to a controlled drying environment should be within 3 to 5 days or as short as possible, bearing in mind that seeds should not be exposed to high temperatures and intense light and that some species may have immature seeds that require time after harvest to achieve embryo maturation.		
4.1.4 All seed samples should be accompanied by at least a minimum of associated data as detailed in the FAO/Bioversity multi-crop passport descriptors.		
4.1.5 The minimum number of plants from which seeds should be collected is between 30-60 plants, depending on the breeding system of the target species	The minimum number of plants from which seeds should be collected is between 30-60 plants, depending on the breeding system of the target species. This number could be lower for wild or endangered species.	

2. Documentation

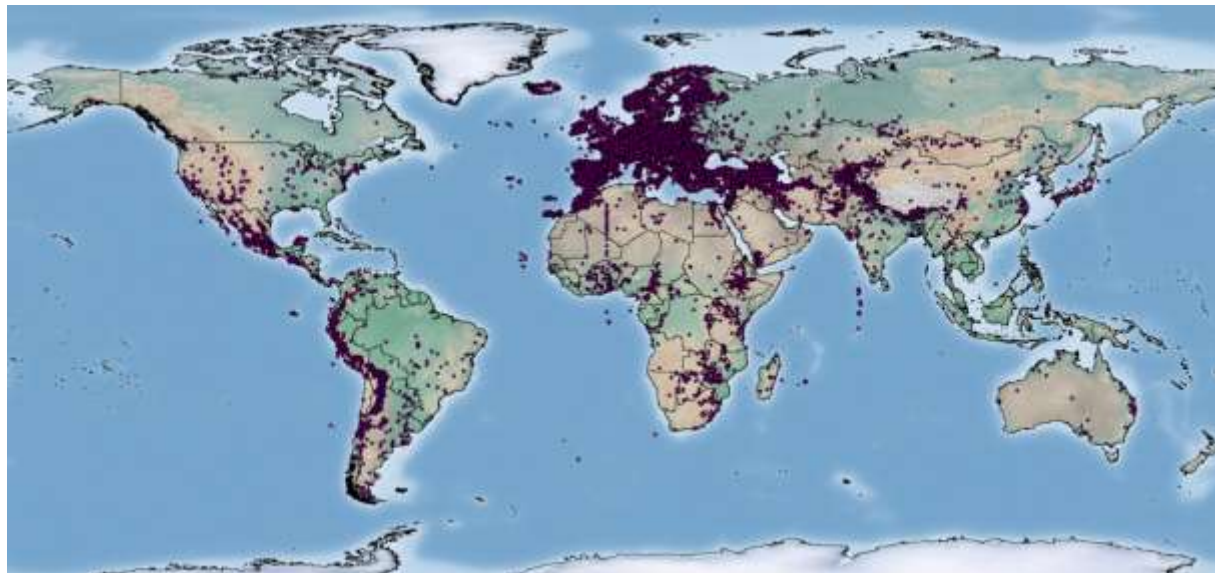
Online catalogue

with information on the European *ex situ* collections:
passport and recently characterization and evaluation data

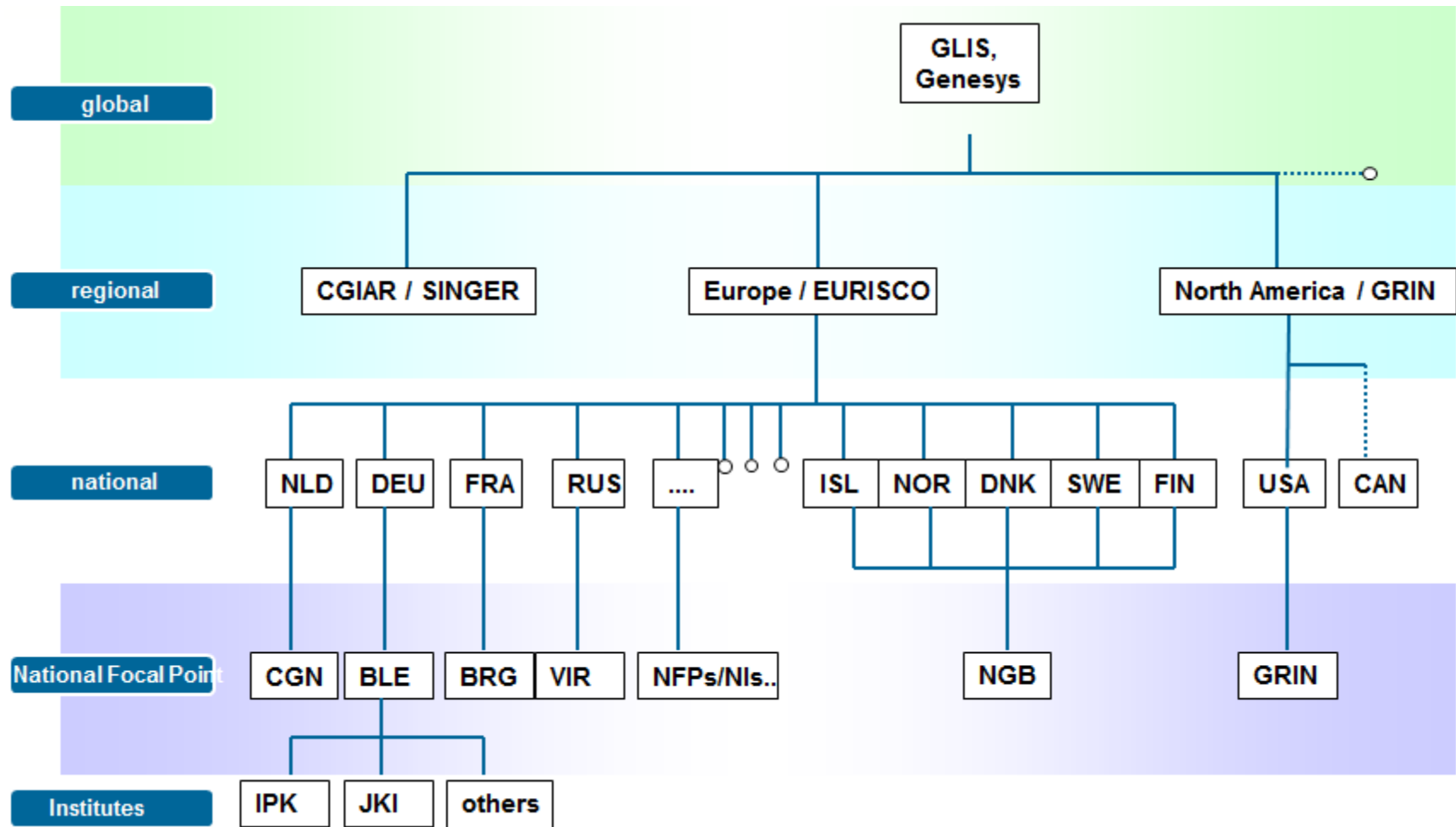


Online catalogue of accessions in European genebanks: EURISCO

- Data gathered from 43 national inventories
- 2M accession data from 393 institutions throughout Europe
- Largest PGR data provider at the accession level
- Register for the Multilateral System (440k) and AEGIS (57k) European accessions



Global Information Infrastructure



Triticum accessions in **EURISCO: 195 000 (10%)**

Total number of selected accessions:

142383

Search term:

Triticum aestivum

Total number of accessions (including misspellings and synonyms):

142383 accessions were found. 1130 different taxa were detected.

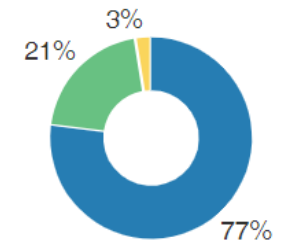
Synonym names were derived from GRIN taxonomy and Mansfeld taxonomy.

Select all

Deselect all

Select	Taxon	No Of Accessions
<input checked="" type="checkbox"/>	Triticum aestivum L. var.erythroleocon Koern.	1
<input checked="" type="checkbox"/>	Triticum aestivum L var.lutescens Al	7
<input checked="" type="checkbox"/>	Triticum aestivum L. var. plenohostianum	1
<input checked="" type="checkbox"/>	Triticum aestivum L. var. ibraense K.Hammer & A.Filat.	4
<input checked="" type="checkbox"/>	Triticum aestivum L. var. erythrosperrum; ferrugineum (Koern.) Mansf.	6

■ Exact Matches
■ Fuzzy Matches
■ Synonym Matches



5. Relations with users

Establishment of the European PGRFA Evaluation Network (EVA)

WHEREAS the world is facing increasing challenges to food security through the loss of diversity and the underutilization of the diversity that exists;

WHEREAS the natural range of growing conditions in Europe calls for and permits more comprehensive evaluation of PGRFA across different environments;

WHEREAS it is of strategic importance for Europe to better utilize Plant Genetic Resources for Food and Agriculture to facilitate adaptation of European agriculture to climate change and to contribute towards the achievement of Sustainable Development Goals;

WHEREAS it is important not only to increase the use of genetic diversity in plant breeding, but also to increase the diversity of stakeholders in plant breeding, including private and public sectors, small and medium enterprises and participatory plant breeding actions;

WHEREAS there is an opportunity to build on existing networks for conservation and use of PGRFA and to develop a European PGRFA Evaluation Network which is open for participation by both private and public sectors in order to facilitate the exchange of data on evaluation in a standardized format;

Now therefore, the Steering Committee of the ECPGR hereby establishes the European PGRFA Evaluation Network in the form of Private/ Public Partnerships within the framework of the European Cooperative Programme for Plant Genetic Resources (ECPGR), in accordance with the following provisions.

01 Definitions

For the purposes of this Proposal –

- i) "AEGIS" means the European Genebank Integrated System;¹
- ii) "ECPGR" means the European Cooperative Programme for Plant Genetic Resources;
- iii) "EURISCO" means the European Search Catalogue for Plant Genetic Resources;²

¹ AEGIS entered into force in 2009 within the framework of ECPGR in order to improve coordination with respect to the conservation of PGRFA in Europe and to facilitate the exchange of PGRFA and related information among the countries and genebanks of Europe, and is now functioning to conserve genetically unique and important accessions for Europe and to make them available for breeding and research

² EURISCO is a European cooperative mechanism, which provides information on nearly 2 million accessions of crop plants and their wild relatives, preserved *ex situ* by almost 400 institutes, based on a network of National Inventories of 43 member countries. EURISCO forms part of the Global Information System on Plant Genetic Resources for Food and Agriculture provided for under the International Treaty of Plant Genetic Resources for Food and Agriculture, and is now being extended to characterization and evaluation data.

- European Evaluation Network (EVA) approved by the ECPGR Steering Committee in Thessaloniki, May 2018

EVA Network

- **Wheat and Barley**
- **Vegetables (carrot, lettuce, pepper)**

- German support (2019-2022)
- European Private Public Partnerships to carry out targeted evaluation of genebank accessions
- Multiplication of material
- Multi-environment evaluation of same accessions across Europe (disease resistance)
- Use harmonized methods and standard protocols
- Genotyping of all accessions
- Provide evaluation data to EURISCO (embargo)
- Breeding companies evaluate at their cost
- Use of SMTA



Thank you for your attention