

ECPGR – Phase IX 2014-2018



Creola Brezeanu

Chair of Grain legumes Working Group

**Meeting of the ECPGR Activity
“NETWORKING”**

17-18 October 2017, Ljubljana, Slovenia

ECPGR

Legumes working group

- The Grain Legumes Working Group was established in 1991.
- The profile of the Working Group has become recognized as an important focus for grain legume genetic resources coordination within Europe.
- Currently the group involves **94 members** – (genebank curators, crop specialists, information, documentation, plant breeders, law and policy makers, others) from 38 countries.
- The Working Group covers a range of species from its inception (*Arachis, Cicer, Glycine max, Lens, Lupinus, Phaseolus, Pisum, Vicia faba and Vigna*).

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ECPGR Central Crop Databases

ECPGR Database	Database Manager	Institute	Country
<i>Cicer</i>	Graça Mendonça Pereira	Instituto Nacional de Investigação Agrária e Veterinária (INIAV), Polo de Elvas	Portugal
<i>Glycine</i>	Margarita Vishnyakova	N.I. Vavilov Institute of Plant Industry (VIR)	Russian Federation
<i>Lens</i>	Lerzan Gül Aykas	PGR Department, Aegean Agricultural Research Institute	Turkey
<i>Lupinus</i>	Pawel Barzyk	Poznanska Hodowla Roslin	Poland
<i>Phaseolus</i>	Wolfgang Kainz	Austrian Agency for Health and Food Safety (AGES), Dept for Plant Genetic Resources	Austria
<i>Pisum</i>	Mike Ambrose	Department of Crop Genetics, John Innes Centre	United Kingdom
<i>Vicia faba</i>	Gérard Duc	Institut National de la Recherche Agronomique (INRA), UMR agroécologie, AgroSup/INRA/uB	France
<i>Vicia</i>	Wolfgang Kainz	Austrian Agency for Health and Food Safety (AGES), Dept for Plant Genetic Resources	Austria

Activities and achievements of the GL WG during the phase IX

- 1. Identification of funding opportunities** and development of interaction strategies inside the group (the last meeting of extended group - in 2013 at Novi Sad)
- 2. Establishment of links with other networks, project and initiatives**
- 3. Involvement in standards elaboration**
- 4. Publications**

Major achievements of the GL WG, in phase IX

1. Identification of funding opportunities -The group was active in terms of participation at **ECPGR Activity Grant Scheme (Phase IX)** - two proposals were submitted in frame of Third and Fourth call:

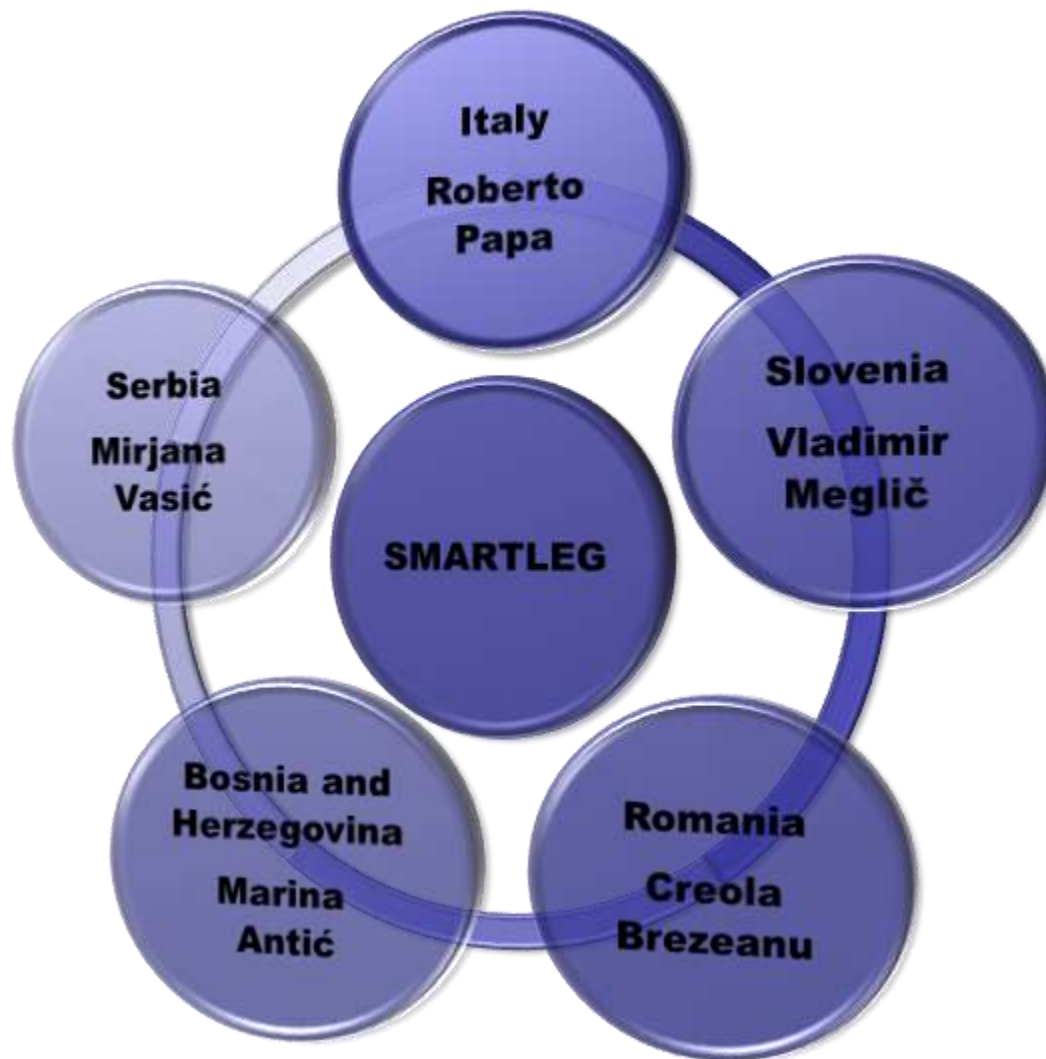
- **Efficient management of resources for smart legumes utilization SMARTLEG, in frame of the Third call**
- **Identification, Characterization and Documentation of Underused Grain Legumes for Sustainable Future – LESSFORMORE, in frame of the Fourth Call**

1. Identification of funding opportunities

WHY SMARTLEG PROJECT????

- very limited number of *P. coccineus* accessions – the improvement of collection is imperatively needed;
- large number of *P. vulgaris* accession - but insufficient information;
- provide access and increase utilization;
- detect the most suitable resources able to perform in new climate change condition;
- promoting inclusion and utilization of valuable accessions into the European Collection;
- increase quantity and quality of data in EURISCO, including *in situ* data.

THE PROJECT TEAM



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STEPS IN PROJECT DEVELOPMENT

1

- Multi-crop passport descriptors and seed characteristics of *P. vulgaris* and *P. coccineus* from different collections were used by project partners to establish a set of several hundreds of accessions with diverse phenotypes and distinct geographical origin.

2

- Accessions were further examined by the partners for morpho-agronomical traits in the field trials.

3

- The phenotypic traits used in the present study are selected from descriptor list proposed by the PHASELIEU consortium - a minimum of 15 characters of plant, flower, pod and seed from the several descriptor lists.

STEPS IN PROJECT DEVELOPMENT

4

- A set of 90 representative *P. coccineus* accessions from partner gene banks are genotypically assessed at the AIS using microsatellite markers developed for *P. vulgaris*.
- The accessions will be selected on the basis of multi crop passport descriptors, available morphological characterization data based on descriptor list and seed availability from all GB involved in the consortium.

5

- The collected data of phenotypical and genetic characterization will be uploaded into the *Phaseolus* Database and EURISCO.

EXPECTED IMPACT

- **The available EURISCO/national database including newly acquired data will be made available and linked to the specific bean databases and to the researchers involved in bean research, breeding and to the other users.**
- **The newly acquired knowledge, experience and data will enable better and more efficient gene bank management in accordance with principles of AEGIS.**
- **SMARTLEG will provide useful contributions to further *Phaseolus* research and production, thanks to implication of different specialists in team.**

Expected products/results	EXPECTED PRODUCTS RELATED TO ECPGR OBJECTIVES Corresponding ECPGR outcome, output, activity
SSR marker data on commonly agreed set of 90 European <i>Phaseolus coccineus</i> accessions	Outcome 1, output 1.2., activity 1.2.3: Monitoring of the management of AEGIS accessions by the AMs in accordance with the principles of AEGIS
Increasing the number of AEGIS <i>Phaseolus</i> sp. accessions	Outcome 1, output 1.1., activity 1.1.2.: Establishment of proper documentation of AEGIS accessions.
Increasing quality and quantity of data in EURISCO	Outcome 1, output 1.2., activity 1.2.2.: Verification of the proposed AEGIS accessions
Acquired information will be useful for end users (e.g. breeders)	Outcome 1, output 1.2., activity 1.2.1.: Identification of eligible accessions to be proposed for registration as AEGIS accessions Outcome 1, output 1.5.; activity 1.5.3.: Services for characterization, evaluation and/or phenotyping of AEGIS accessions provided to AMs Outcome 2, output 2.1.; activity 2.1.2. Collaboration between NFPs and collection holding institutes strengthened Outcome 5, output 5.4., activity 5.4.1: Research partnerships established between genebanks and researchers, including through EU projects

Activities and achievements of the GL WG, in phase IX

2. Establishment of links with other networks, project and initiatives

- BEAN_ADAPT is an ERA_CAPS project, developed by a consortium of five European and American research entities
- Regeneration, reproduction and characterization of vegetable species with unique character – Romanian Sectorial Program.

Major achievements of the GL WG, in phase IX

2. Establishment of links with other networks, project and initiatives - ECPGR proposals for future cooperation were:

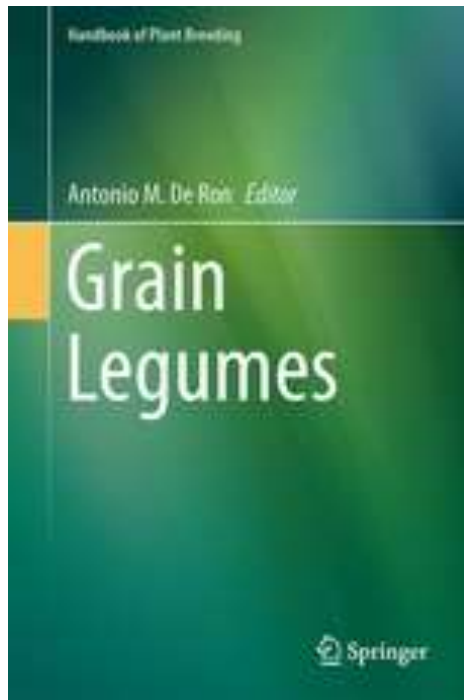
- Provision of genebank accessions to the project;
- Offer of evaluation sites in different environments;
- Exchange of information;
- Dissemination of results through ECPGR channels (websites, bulletins)

Activities and achievements of the GL WG, in phase IX

3. Documents and publications of interest

➤ Monographs

- De Ron AM (editor). 2015. [Grain Legumes](#). Handbook on Plant Breeding no.10. Springer-Verlag New York.



This book is devoted to grain legumes and include eight chapters devoted to the breeding of specific grain legume crops and five general chapters dealing with important topics which are common to most of the species in focus.

Activities and achievements of the GL WG, in phase IX

3. Documents and publications of interest

➤ Proceedings

- [EUCARPIA International Symposium on Protein Crops: V Meeting AEL, Pontevedra, Spain. 4-7 May 2015. Plant Proteins for the Future.](#) Organized by the European Association for Research In Plant Breeding (EUCARPIA, The Netherlands), the Spanish Association for Legumes (AEL) and the Mision Biológica de Galicia-Spanish National Research Council (MBG-CSIC); Scientific Coordinator A.M De Ron

- [Book of Abstracts](#)

- [Proceedings: ACTAS AEL 6 2nd ed](#)

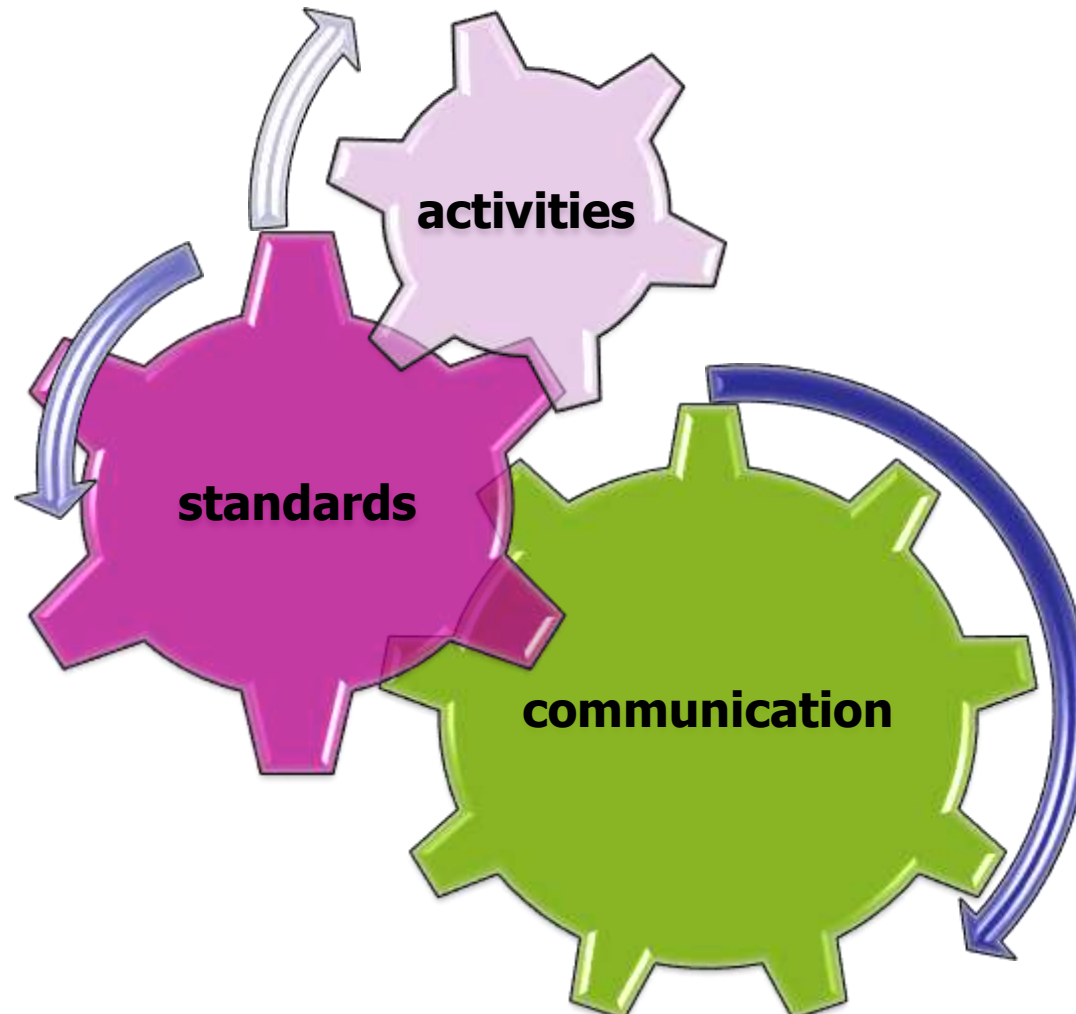
➤ Journals

- [Legume perspectives \(The journal of the International Legume Society\)](#)

LINKS WITH OTHER NETWORKS AND INITIATIVES

- Involvement in EC calls for proposals and initiatives:
 - Preparatory action on GR
 - Focus Group on GR (EIP-AGRI)
 - FP7 Framework and EUCARPIA (PGR secure on CWR and LR)
 - H2020 (proposals submitted)
 - ERA-NET Plus actions

Instead of conclusions



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AEGIS (operational, accessions characterized and evaluated???)

GL species in AEGIS

Genus/Species	European Accessions	Countries
<i>Glycine</i>	124	Nordic Countries
<i>Lupinus</i>	26	Nordic Countries (25), Netherlands (1)
<i>Phaseolus</i>	34	Nordic Countries
<i>Pisum</i>	527	Netherlands (300), Nordic Countries (227),
<i>Vicia</i>	100	Netherlands (96), Nordic Countries (4),
<i>Vigna</i>	493	Germany

GAPS IDENTIFIED

- Contributions for 2016 – due to the lack of payment some countries were not eligible for ECPGR Funds, and the team project was drastically reduced;
- Low interest of members to be involved in so called “short term activities”.
- Country quota already used and the member were in impossibility to be involved in projects.
- Associate Member Institutions – (the AEGIS membership signed at country level, not all institutions with members in GL WG are AEGIS member)

Recommendation

- Stimulation of group activity by meetings and development of common project inside ECPGR and in other calls,
- Maintaining ECPGR structure – group structure – even the member implication is not very strong for all activities, I consider it is important to keep all members and all expertise inside the ECPGR, and to design activities which will allow and motivate members to be involved in future activities.

Recommendation

- Training activities or introduction of mentors for AEGIS selecting accessions
- Encourage Upload CE dates in EURISCO

THANK YOU VERY MUCH FOR YOUR ATTENTION!

