FOSTERING THE NEED OF IMPLEMENTATION OF THE ECPGR EUROPEAN EVALUATION NETWORK (EVA) ON GRAIN LEGUMES

Creola BREZEANU
Vegetable Research and Development Station, Bacau, Romania

ForEVA – Meeting 10-11 October 2023, Bucharest, Romania
ForEVA preparatory action towards the establishment of an EVA-legume network

Selection of species and traits to be proposed to EVA network

Identification and selection of partners and stakeholders

Duration
March 1st 2023 – 30th April 2024

Partners
21 Partners

Funding

Multi crops
Grain legumes

Stakeholders
Inform - Consult - Involve - Collaborate

Functional frame for PPP

Speeding up the breeding gains the access and sustainable use of GrainLeg GenRes
## ECPGR Grain Legumes Working Group Members

<table>
<thead>
<tr>
<th>Participant countries</th>
<th>Ongoing projects</th>
<th>Finalized projects</th>
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</thead>
</table>

**101** ECPGR Grain Legumes Working Group Members

**39** Participant countries

**2** Ongoing projects

**2** Finalized projects

- Bosnia and Herzegovina, Bulgaria, Estonia, France, Georgia, Germany, Greece, Ireland, Italy, Latvia, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom
Grain Legumes WG mission and initiatives

**COMMUNICATION AND DISSEMINATION**

- Focal point for GL GR issues
- Network of interest for GL links with other organizations
- Fostering links between research, breeding communities and other users
- Focal point for emergency actions and resolution of issues for GL GR in Europe

**GROUP MISSION**

**NETWORKING IN FRAME OF DIFFERENT PROGRAMS AND PROJECTS**

**VRDS, KIS, IPK, INIA**

**GRANT SCHEME - SIXTH CALL - PHASE X**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Working Group(s)</th>
<th>Activity Coordinator</th>
<th>Date of approval</th>
<th>Proposal</th>
<th>Budget table</th>
<th>Budget in Euro</th>
<th>Letter award</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>EURO- POTATOES</td>
<td>Veli-Matti Roska</td>
<td>14 Feb 2023</td>
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<td>Creola Brezana</td>
<td>1 Dec 2022</td>
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<td>Manuela Nagel</td>
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<td>€ 59,997</td>
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<td>INWheatORy</td>
<td>Lorenzo Raggi</td>
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<td>€ 30,250</td>
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<td>Sylvester</td>
<td>Georgios Merkouroupolos</td>
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<td>€ 25,500</td>
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Total: € 190,866.99
Background the context behind the choice of this Activity

the need of breeding resources and knowledge; gaps (low agronomic expertise, insufficient cooperation between stakeholders, non-competitive management of PGR), poor adaptation of protein plant cultivars in Europe

data, knowledge, materials, practices, that need to be largely implemented
Activity: status, challenge, initiative, justification

**STATUS**
- GB materials
- Advanced materials and available data from different projects
- Imperative need of integration and widely sharing to stakeholders along European agri-food chain.

**CHALLENGE**
- Optimization of the exploitation of GenRes in legumes breeding

**INITIATIVE**
- To speed up the breeding gains
- Multi-actor approach

**Need of integration and widely sharing to stakeholders in European agri-food chain**

**Agronomic performance and sustainability**

**EVA-legume network**
Rationale for the choice of partners

PARTNERS SELECTION
FOREVA GRAIN LEGUMES

STEP 1
Survey inside of the group
INTEREST

STEP 2
On conservation, breeding, farming in linked projects
EXPERTIZE

STEP 3
Coverage of European agro climatic diversity
GEOGRAPHIC REPRESENTATION

STEP 4
Phenotyping, genotyping, seed increase, screening for pest and pathogen resistance
ROLE
Methodology or Approach:

- Different legumes species
- Stakeholders
- Partner’s expertise
- Along Europe
- Different challenges and opportunities

Breeding
Conservation, evaluation, use
Benefits along agri-food chain
**ForEVA workplan**

**ACTION 1.**  
Survey for PGR national inventory and networking

- **D1.1** List of GrainLeg GenRes proposed for EVA network

- **D1.2** List of stakeholders that intend to support the EVA implementation (letters of commitment)

**ACTION 2.**  
Development of PGR collections, traits selection, protocols for investigation, EVA ID implementation

- **D2.1** Set of EVA materials
- **D2.2** Sets of traits prioritized
- **D2.3** Sets of harmonized protocols

**ACTION 3.**  
Design of experiments, plans for data collection and integration

- **D. 3.1** Comprehensive list of locations and experiments

**ACTION 4.**  
Plans for seed exchange and distribution

- **D4.1** Plan and workflow to ensure necessities in terms of seeds

**ACTION 5.**  
Management Dissemination Communication Stakeholder engagement
Stakeholder’s engagement

1. Supportive role in terms of straighten and consolidate the importance, the benefits and the impact of EVA.

2. Identify the needs, challenges and opportunities at different segments of Agri food chin.
Stakeholder's engagement

Cooperative: 18
Gene Bank: 10
Research Company: 4

Breeding Company: 1
Research Institute: 1
Public Research Institute: 1

Field trials: 12
Breeding: 10
Conventional and organic farming: 6
Plant pathology: 3
Genetics: 3

Agronomics: 3
Genomics: 1
Bioinformatics: 1
Import and export of certified seeds: 3
Ecology: 3

CROPS
- Chickpea: 6
- Lentil: 8
- Bean: 19
- Grains: 3
- Soy bean: 4
- Faba bean: 8
- Lupin: 5
- Pea: 18
Why to join ForEVA

Partners are experienced and have background in

- **management of significant volumes** of phenotyping and genotyping data for a large variety of species as bean, chickpea, lentil, pea, lathyrus, lupinus and fava (INCREASE, BRESOV, CiLaKlima, PreLuteus, SPITFIRE) – this will have a positive impact on development of Actions 1, 2, 4.

- **screening for different traits** with breeding value (BRESOV, CiLaKlima, PreLuteus, SPITFIRE) related to performance in low input conditions and different tolerance and resistance – linked to Action 1, 2, 3

- expertise and background to **support and to improve diversity** (CROPDIVA, BRESOV, EUCLEG, INCREASE) – linked to Actions 2, 3, 4, 5.

- practices to stimulate **the use and the multiple benefits** of GrainLeg in agri-food chains (LEGATO, EUCLEG, BRESOV, INCREASE) – linked to Action 1 and Action 5.

- **capacity for networking** involving large variety of stakeholders (EUCLEG, INCREASE).
Expected output related ECPGR Objectives

ForEva OUTPUT

• Operational EVA legumes network
• Frame for PPP

Output 5.1 European Evaluation Network for PGRFA developed

ForEva OUTPUT

• Species and traits selection
• Location, resources for involvement

Output 4.3 Good practices for on-farm management and conservation and adding value promoted

ForEva OUTPUT

• Bridging projects
• Financial resources identified

Output 4.4 Definition of Most Appropriate Areas (MAPAs) sites of onfarm cultivated plant diversity discussed and implemented

ForEva OUTPUT

• Selected traits
• Harmonized protocols

Output 2.4 Users' expectations explored and functionalities of EURISCO increased