GRAIN LEGUMES:
GERMLASM AND RESEARCH
AT VRDS BACAU

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ForEVA – Fostering the need of implementation of the ECPGR’s European Evaluation Network (EVA) on Grain legumes

10-11 October 2023, Bucharest, Romania
Vegetable Research and Development Station Bacau

- Public research unit
- 1 ha of plastic tunnels
- 2 ha of unheated greenhouses
- 4.5 ha research in ecological system
- Experimental field of 20 ha for conventional vegetable cultivation
- 40 ha fields for seed multiplication
- Gene pole – for germplasm conservation
VEGETABLE DIVERSITY

ON FARM VALIDATION, EDUCATION, LONGLIFE LEARNING

DEVELOPMENT OF ENVIRONMENTALLY FRIENDLY CULTIVATION PRACTICES

ECOLOGICAL AND CONVENTIONAL BREEDING

PERMANENT DEVELOPMENT OF SEED PRODUCTION TECHNOLOGIES

ECOLOGICAL AGRICULTURE AND PLANT PROTECTION

SEEDS PRODUCTION

BREEDING

PLANT PHYSIOLOGY

FLOWERS TECHNOLOGY

BIOTECHNOLOGY
Role of VRDS Bacau

- Development of new performant vegetable cultivars.
- Research for durable conservation and management of biodiversity.
- Elaboration and implementation of efficient modern technologies focused on a better exploitation of the genetic resources in ecological and conventional system.
- Active contribution to local, regional and national development by approaching and solving problems generated by the needs of healthy food and unpolluted environment.
VRDS projects on legumes

Core collections, sets of resilient material, new cultivation schemes (validation of traits)

Core collections, genetically purified accessions SSD, phenotyping data, seed increase

New accessions introduced in collections, morphologic and agronomic characterization, new data in Eurisco, development of different core collections

Improved volume of collections, new C&E data, cultivation schemes, newly bred improved elite materials
VRDS’s grain legumes collection

THE TOTAL NUMBER OF PULSES STOCKS FROM VRDS BACAU
3568
Interest and capacity to be involved in evaluation of different GL species

CHICKPEA

BEAN
Traits to be considered

- technological quality traits such as grain size, color and cooking time - decisive for the acceptance of a common bean cultivar by consumers and differ between countries
- growth habit
- root architecture
- flowering time
- traits related to droughts resistance
- pod shattering
- diseases resistance
Existing capacity to support EVA GrainLegume

- Phenotypic characterization
- Assembly of collections
- Seed increase - development of genetically purified accessions
- Screening for complex traits related to resilience
- Field intercropping and crop rotation experiments
- Image analysis
- Investigations how farm management impacts on genetic diversity
- On-farm evaluation for agronomic performances in crop rotation models
- Evaluation and selection of breeding lines prior to on-farm testing.
Expectations from EVA legumes

✔ Material
  - improved volume and quality of European accessions with C&E data in EURISCO,
  - access and use to PGR material

✔ Traits
  - new or updated crop-specific traits
  - identification of traits of interest (by breeding sector and farmers)

✔ Conditions of operation
  - functional multi actor participatory network
  - multiple PPP

✔ Constrains
  - Gaps in correlation of time and human specialised resources with financial support
  - Gaps in communication, lack of trust along cooperation chain
  - Difficulties if not harmonizing the data
Ways to cooperate/experience with PPP

- Development and share of a concept for an European Evaluation Programm
- Interlinked focus groups on specific crops or thematic area
- Consolidate communication inside the partnership
- Identification of additional funding sources

Based on previous experience with PPP

- Partnerships with SMEs in financed projects with a high degree of innovation, with concrete results and real impact on the market.
- Active cooperation with farmers
- Engagement in national clusters
Thank you!