



GRAIN LEGUMES: GERMPLASM 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





BIOTECHNOLOGY



BREEDING



SEEDS PRODUCTION



PLANT PHYSIOLOGY



FLOWERS TECHNOLOGY

ECOLOGICAL AGRICULTURE AND PLANT PROTECTION



Role of VRDS Bacau



Development of new performant vegetable cultivars.



Research for durable conservation and management of biodiversity.



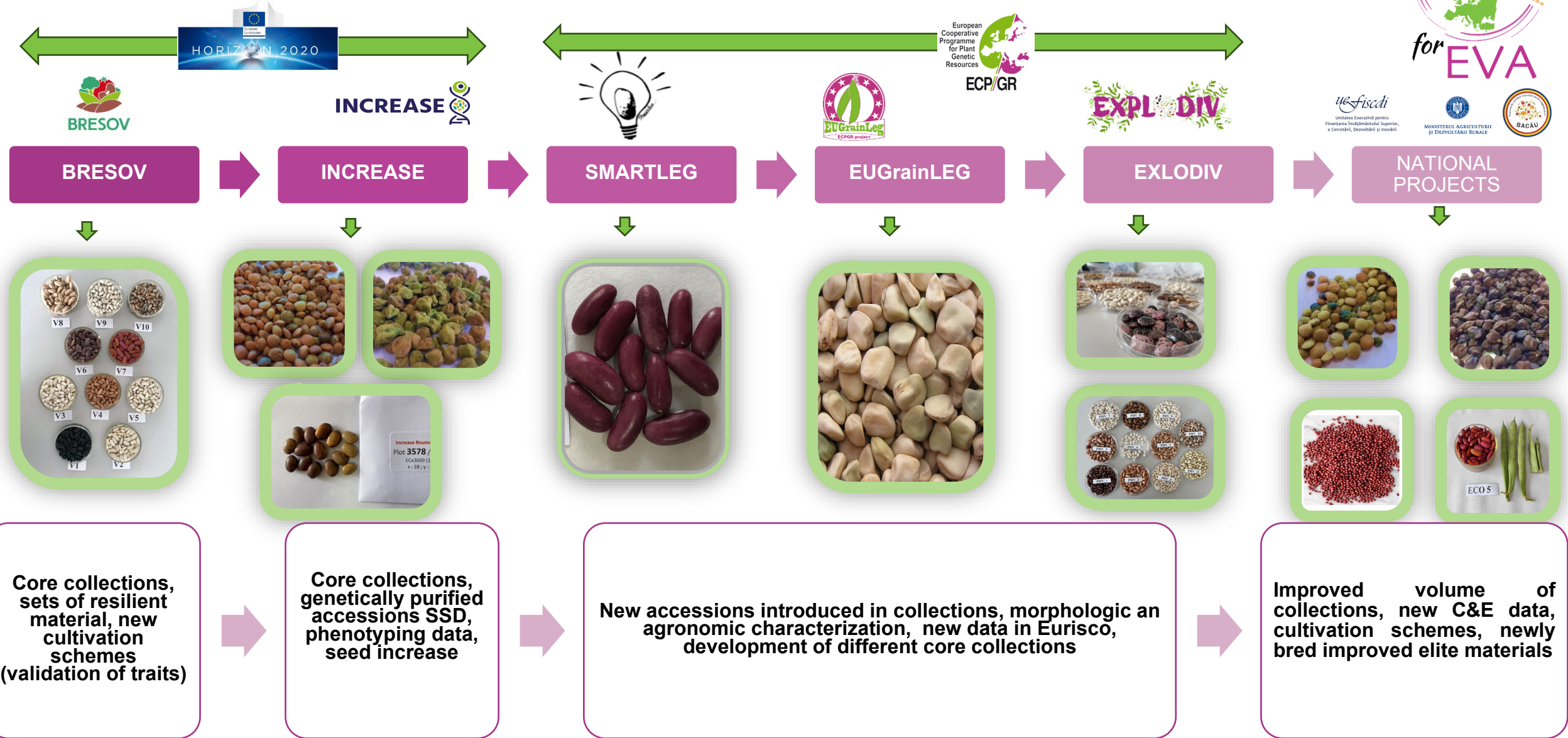
Elaboration and implementation of efficient modern technologies focused on a better exploitation of the genetic resources in ecological and conventional system.



Active contribution to local, regional and national development by approaching and solving problems generated by the needs of healthy food and unpolluted environment.



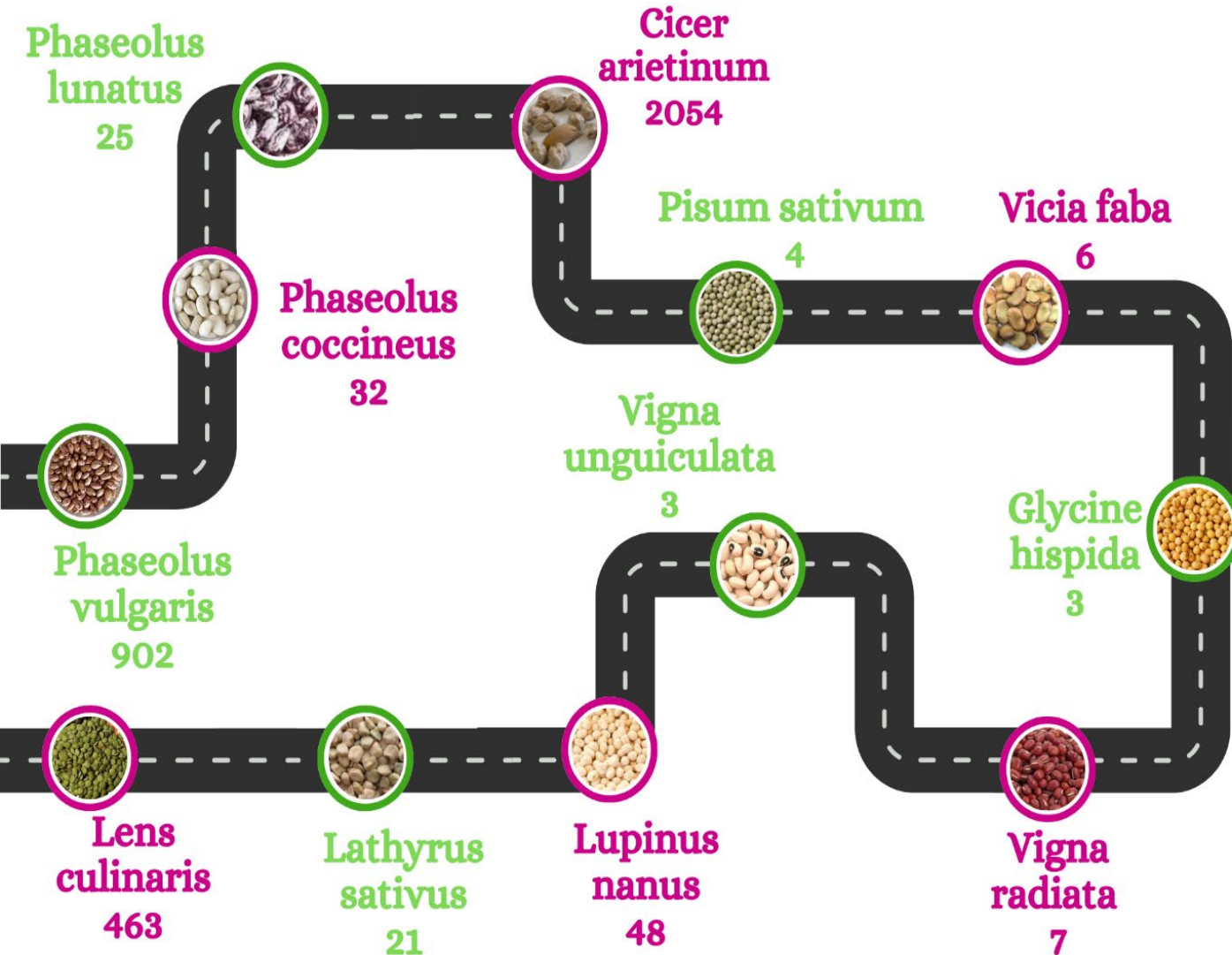
VRDS projects on legumes



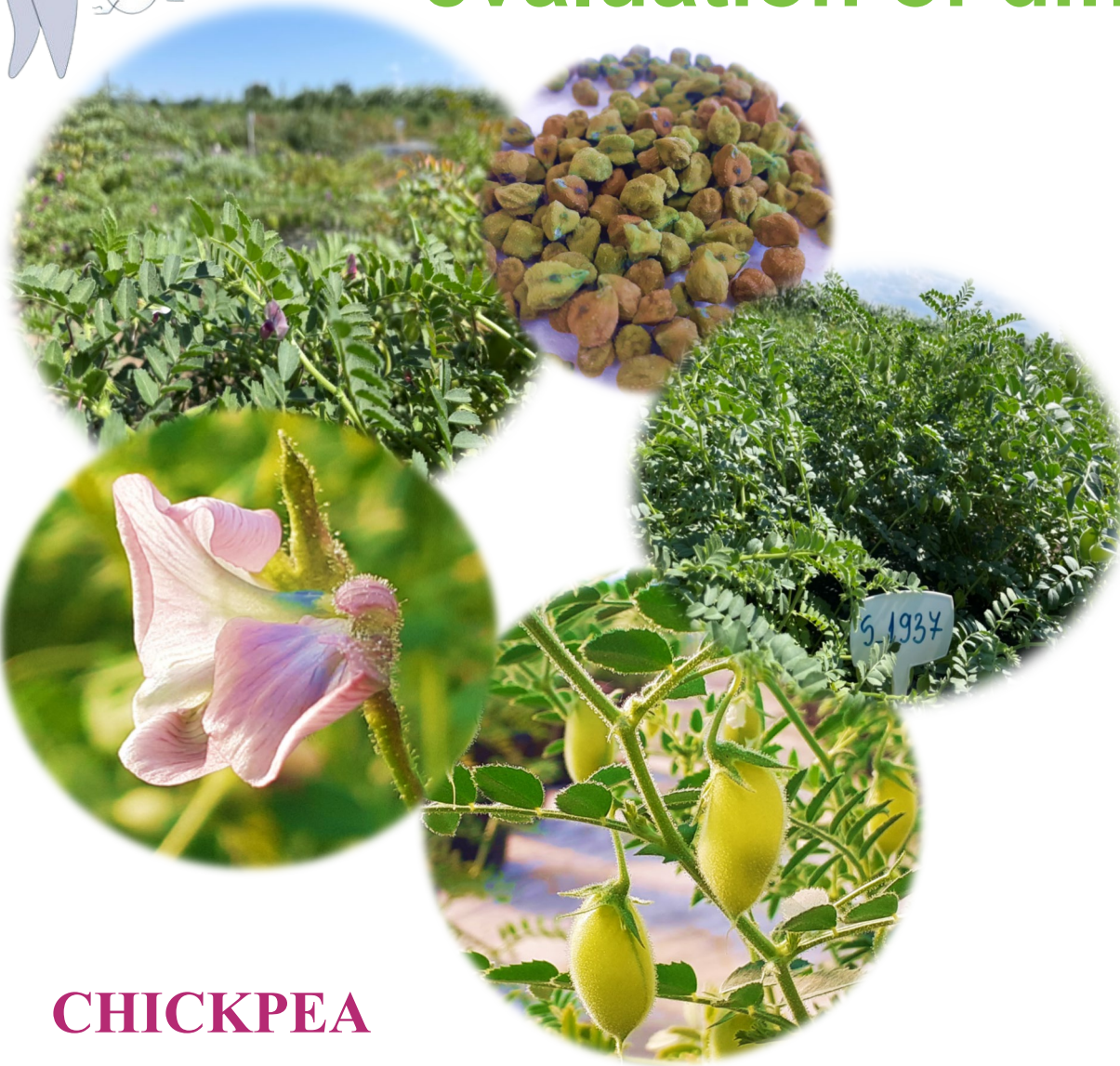
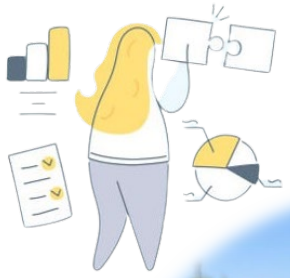
VRDS's grain legumes collection



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

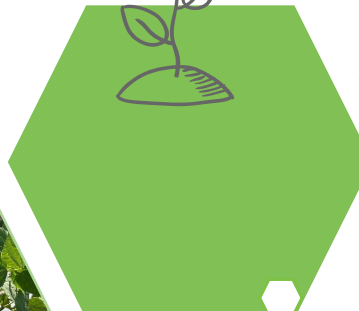


Assembly of collections



Screening for complex traits related to resilience

Field intercropping and crop rotation experiments



Phenotypic characterization

Seed Increase - development of genetically purified accessions



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 corelation of time and human specialised resources with financial support
- Gaps in comunication, lack of trust along cooperation chain
- Difficulties if not harmonzing 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!

