



FOREVA ACTIVITIES ASSOCIATED WITH OTHER PROJECTS AT KIS

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

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Agricultural Institute of Slovenia/KIS_Short presentation



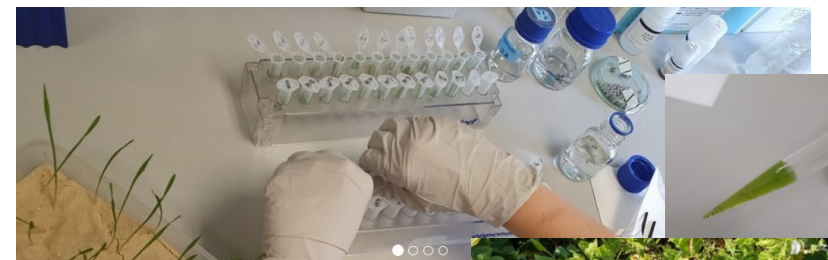
Leading public research institution in Slovenia

Location: Ljubljana, experimental infrastructure in Jablje

Main activities:

- Crop Science
- Plant Protection/Plant Protection Laboratory
- Animal Production
- Fruit Growing, Viticulture and Oenology
- Agricultural Economics
- Agricultural Engineering and Energetics
- Agricultural Ecology and Natural Resources
- Central Laboratory
- Genetics Laboratory
- Project Management Office
- Technology Transfer Office
- State of art equipment
- Seed Testing Laboratory (ISTA accredited)
- Experimental fields
- Plant Gene Bank

Staff: 251
Researchers: 93
- PhD: 59
- MSc: 34
Other staff: 158
- professional staff: 146
- technical and administrative staff: 12



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Active projects associated with legumes



INCREASE
The INCREASE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862862.



ecobreed
IMPROVING CROPS



Funded by European Union
Horizon 2020
Grant agreement No 771367

ARIS
Javna agencija za znanstvenoraziskovalno
in inovacijsko dejavnost Republike Slovenije



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA KMETIJSTVO,
GOZDARSTVO IN PREHRANO



CORE organic

European
Cooperative
Programme
for Plant
Genetic
Resources
ECP/GR



**Javna služba
v vrtnarstvu**



Root2Res
Root phenotyping and genetic improvement for
rotational crops resilient to environmental change



Funded by the
European Union
Grant agreement No 101060124

LiveSeeding



Agricultural Institute of Slovenia



ECP/GR

KIS legume collection



Grain legume collection:

- Common bean (*Phaseolus vulgaris*): 1037 ACC
- Runner bean (*Phaseolus coccineus*): 62 ACC
- Fababean (*Vicia faba*): 36 ACC
- Pea (*Pisum sativum*): 3 ACC
- Cowpea (*Vigna unguiculata*): 1 ACC
- Grass pea (*Lathyrus sativus*): 1 ACC
- White lupin (*Lupinus albus*): 1 ACC
- Meadow vetching (*Lathyrus pratensis*): 11 ACC

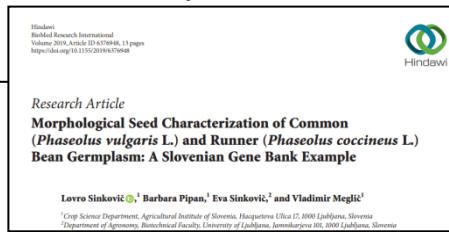
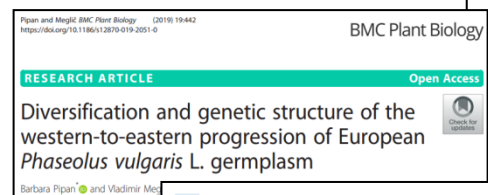
Some other *Fabaceae* species:

- Common vetch (*Vicia sativa*): 2 ACC
 - Narrow leaved vetch (*Vicia angustifolia* sin.. *Vicia sativa* subsp. *angustifolia*): 1 ACC
 - Cow vetch (*Vicia cracca*): 15 ACC
 - Large yellow vetch (*Vicia grandiflora*): 5 ACC
 - *Vicia sepium*: 7 ACC
 - *Vicia* sp.: 11 ACC
- ✓ For all collected genetic resources, 'Multi crop passport descriptors' are available containing basic general data on an individual sample (place and date of collection, description of location, who collected the sample, etc.).
- ✓ For individual genetic resources, we have more detailed data on the characterisation and evaluation based on common descriptors for an individual plant species.
- ✓ Seed exchange upon request via SMTA -> for all the ACCs available



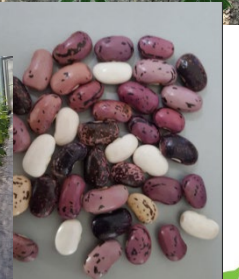
The publication in front of you represents a complex and comprehensive inventory of the bean genetic resources stored at the Slovene Plant Gene Bank of the Agricultural Institute of Slovenia. A 955 common (*Phaseolus vulgaris* L.) and 47 runner bean (*Phaseolus coccineus* L.) accessions were evaluated and characterized using numerous *Phaseolus* spp. seed descriptors (UPOV, CPVO, IBPGR, PHASELIEU) and morphometric parameters. Ten fully developed and undamaged seeds of each accession were measured using six quantitative (numerical) parameters: seed length; seed thickness; seed width; length/width ratio; width/thickness ratio; and 100 or 100 seeds weight for common and runner bean accessions respectively. In addition, seeds were evaluated using seven qualitative (descriptive) parameters: seed colour; number of seed colours; primary seed colour; predominant secondary seed colour; distribution of secondary seed colour; seed veining; and seed shape. For each accession high-resolution photography was recorded. On the basis of six numerical parameters, the geographical origin for the common bean accessions was explained. Of the six numerical parameters used, 10 seeds weight was the most important parameter to distinguish runner bean accessions. Based on seven descriptive parameters, two groups were formed in each of the bean collections. The first group included seeds with a primary and secondary colour, the second group represents seeds with the primary colour of different light or dark colours/shades. On the basis of all traits morphometric parameters, two groups could be clearly distinguished in both collections. The first group included accessions from Andean and second from the Mesoamerican origin.

This book is intended to be used by a wide circle of readers, from gardeners, farmers and students to breeders and researchers, who can acquaint themselves with the large collection stored for future generations at the Agricultural Institute of Slovenia. We dedicate this book to all researchers and enthusiasts who have worked or are still active in the field of genetic resources of agricultural plants, collecting genetic material and knowledge and with that contributing to the conservation and preservation of the natural and cultural heritage in Slovenia.



Expectations from EVA legumes

- Knowledge/material transfer associated with different legume species in terms of their characterization and agronomic behaviour under different growing environments/locations -> network with diverse expertise and stakeholders in terms of conservation, breeding, farming.
- Data about GR from different levels (morphologic, genetic, genomic, metabolomic,...) available for implementing into GL/cb breeding programme(s) -> increase efficiency
- Further collaborations on GL within new projects proposals.



Thank you for your attention!

