



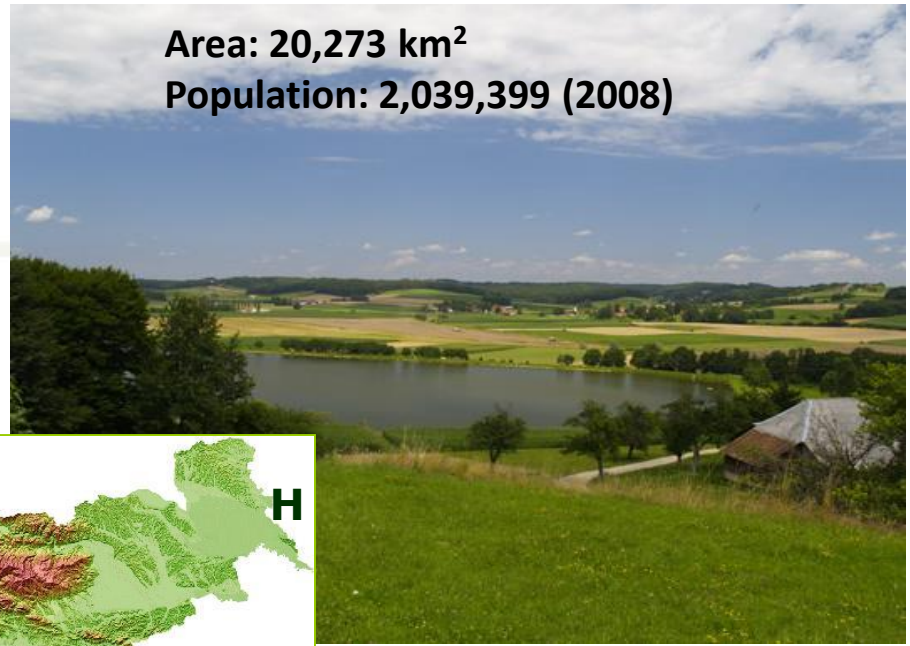
Agricultural Institute of Slovenia



Slovene Plant Gene Bank - Gene Bank at the Agricultural Institute of Slovenia

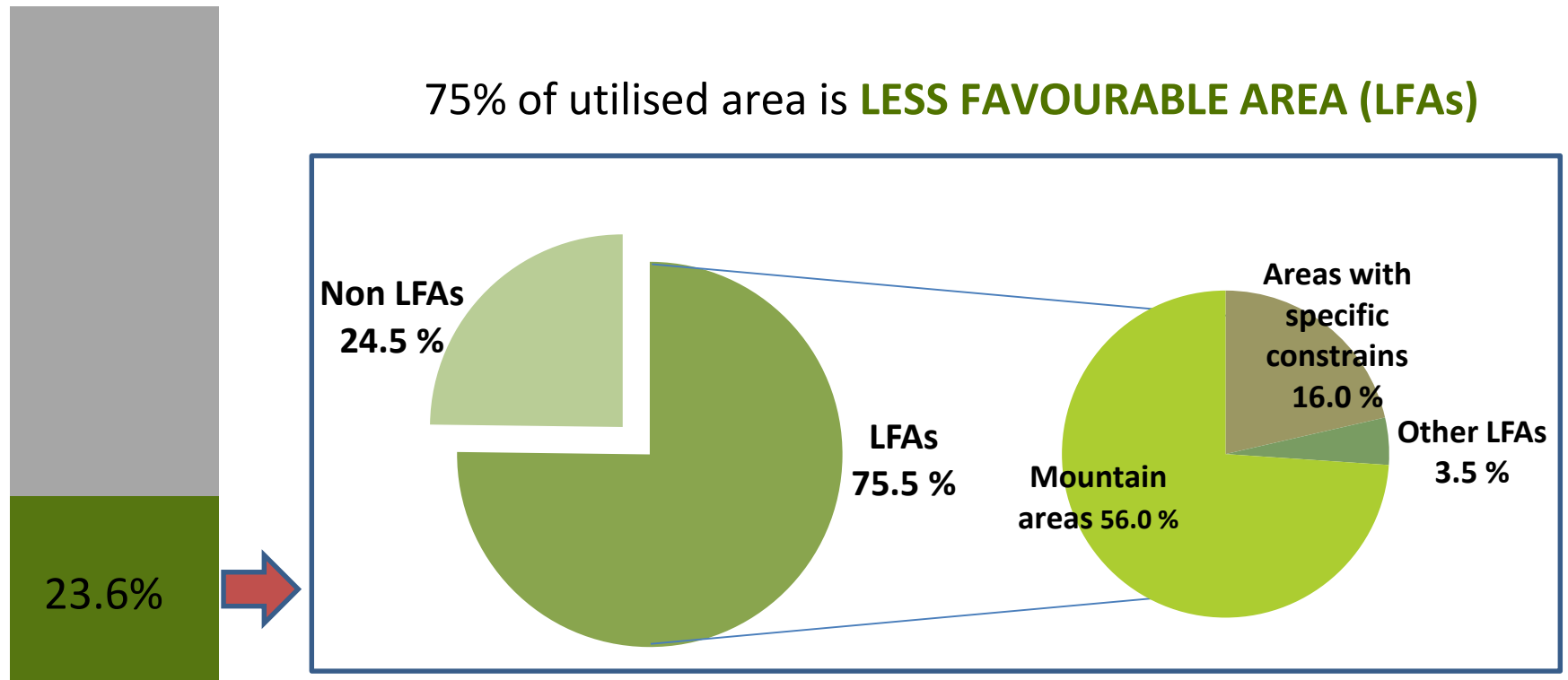
**ECPGR Networking meeting
17 – 18 October 2017, Ljubljana, Slovenia**

Jelka ŠUŠTAR VOZLIČ , Vladimir MEGLIČ



Share of utilised agricultural area in Slovenia

23.6 % of TOTAL AREA is utilised for agriculture, forestry, hunting and fishing

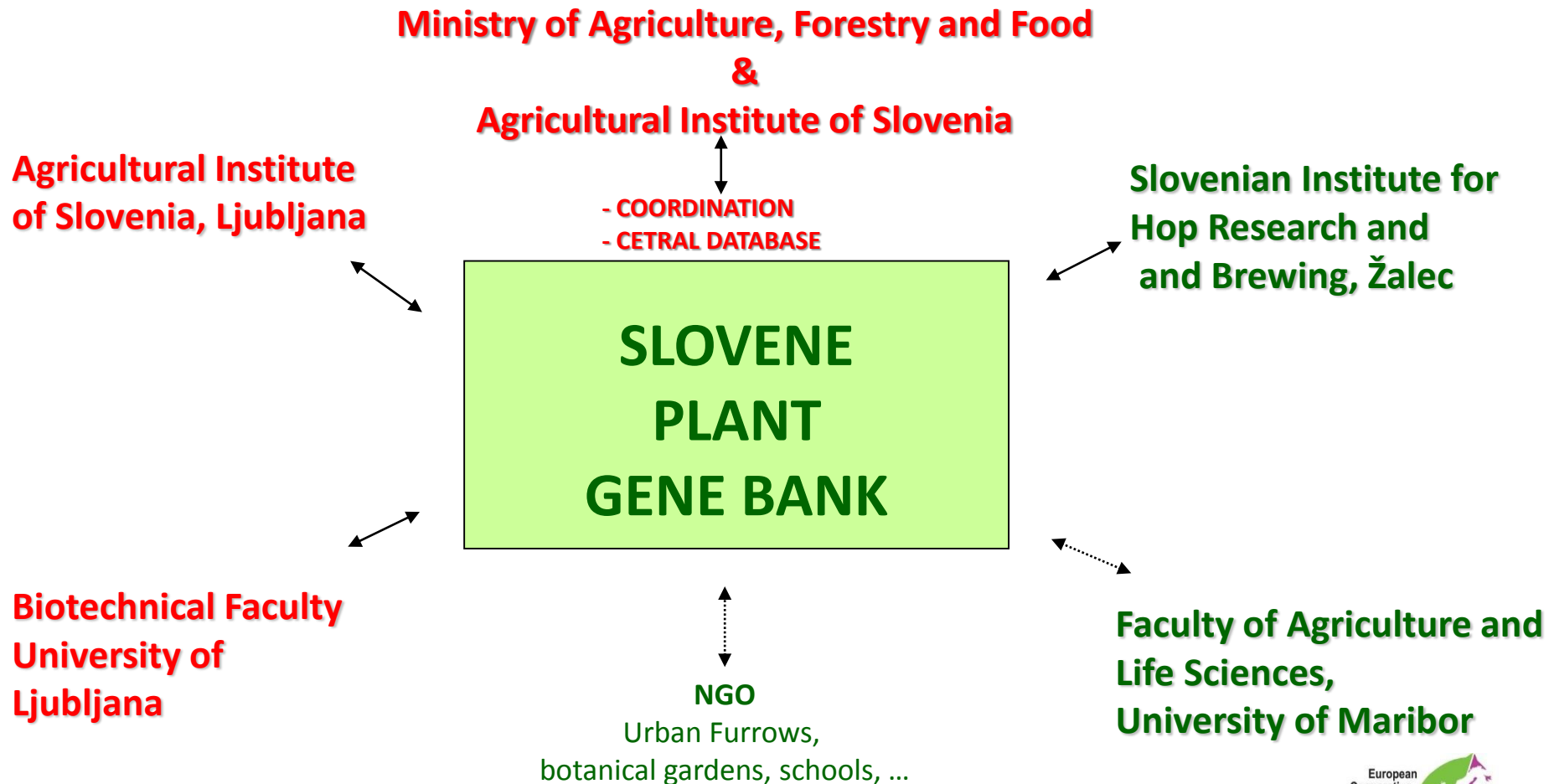


An aerial photograph of a rural landscape. The foreground and middle ground are dominated by a patchwork of agricultural fields in various shades of green and brown, indicating different crops and stages of growth. A small village with several buildings and a church spire is visible in the center-right. The background shows more fields and a line of trees.

Structure of agricultural holdings

- 69,902 agricultural holdings (farms), 4 % less than in comparison to 2010
- 95 % of agricultural holdings are family farms, 5 % are agricultural companies
- Average agricultural holding:
 - Average farm size 6,7 ha
 - Number of field units per farm 5,9 NE
 - Number of livestock 6,9 NE
- Main agricultural activity: livestock production, cca 80 % of agricultural holdings

Slovene Plant Gene Bank



Slovene Plant Gene Bank

AIS: 3220 accessions

- Vegetables: 1466
- Forage crops: 1033
- Potato: 44
- Cereals: 108
- Small fruit: 169
- Grape vine: 90
- Fruit trees: 310

IHPS: 262 accessions

- Hops: 178
- Medicinal and aromatic plants: 84

BF: 1631 accessions

- Cereals: 471
- Maize: 614
- Forage crops: 228
- Fruit trees: 173
- Medicinal and aromatic plants: 145

FKBV : 327 accessions

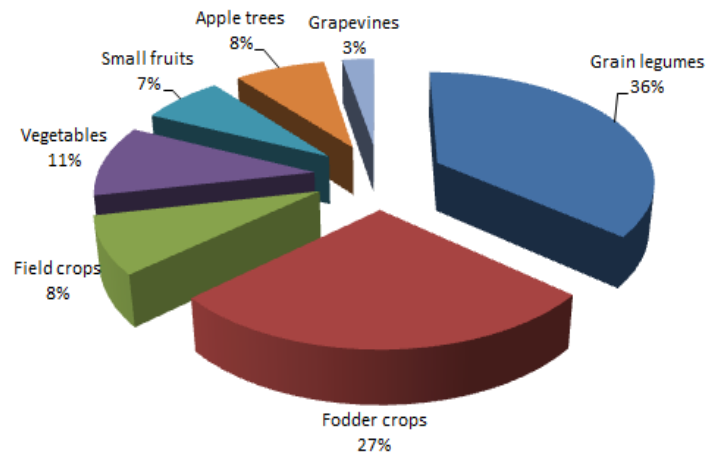
- Fruit trees: 197
- Grape vine: 130

Total number of accessions in the **SPGB: 5440**, represented by total of **248 species**.

- KIS: 204
- BF: 31
- IHPS: 36
- FKBV: 8

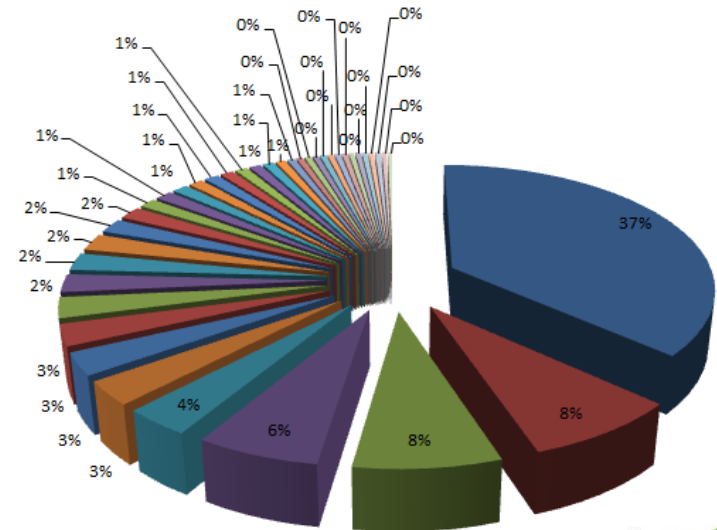
SPGB: Gene bank at the AIS

Representation of genetic resources by groups of crop species (Source: SPGB 2015)



Representation of genetic resources per species

- | | | | | | | | |
|------------|-----------|------------|-----------|-----------|-----------|------------|-----------|
| Phaseolus | Malus | Lactuca | Trifolium | Dactylis | Triticum | Vitis | Allium |
| Festuca | Ribes | Solanum | Vicia | Fragaria | Vaccinium | Medicago | Phleum |
| Rubus | Lotus | Zea | Lolium | Cucurbita | Papaver | Poa | Anthyllis |
| Diplotaxis | Hordeum | Panicum | Lathyrus | Linum | Agrostis | Brassica | Pisum |
| Astragalus | Fagopyrum | Onobrychis | Secale | Trisetum | Bromus | Alopecurus | |



SPGB: Gene bank at the AIS

- Collecting
- Documentation and Regeneration
- Characterization and evaluation
- Conservation (storage at + 4°C, -20 °C)
- Exchange, research, breeding



Evaluation of common bean

Diversity studies:

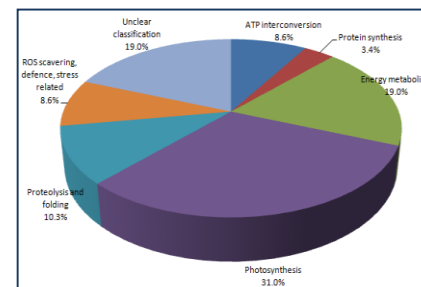
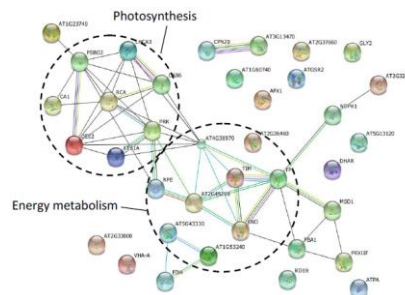
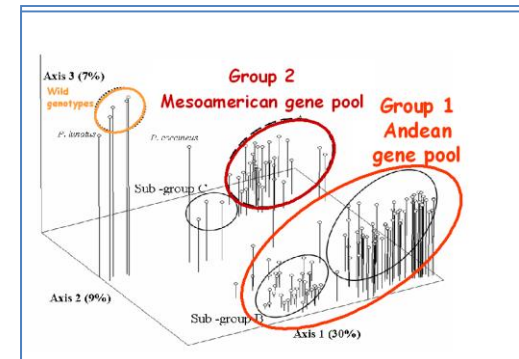
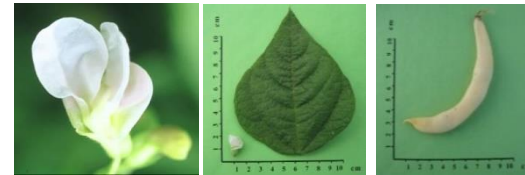
- Morphological markers
- Biochemical markers
- Molecular markers

Genetic erosion

Disease resistance

- *Colletotrichum lindemuthianum*

Drought tolerance



Re-introduction of traditional Slovenian common bean landraces

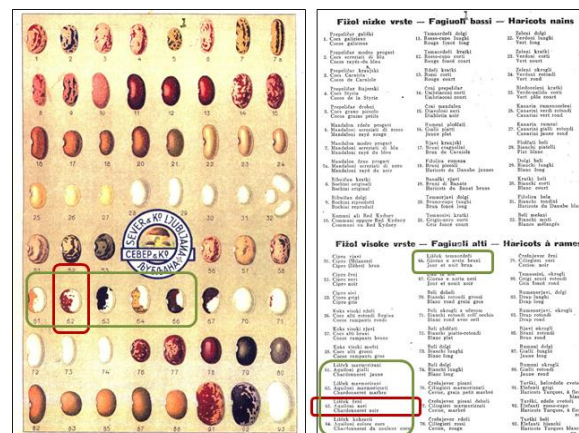
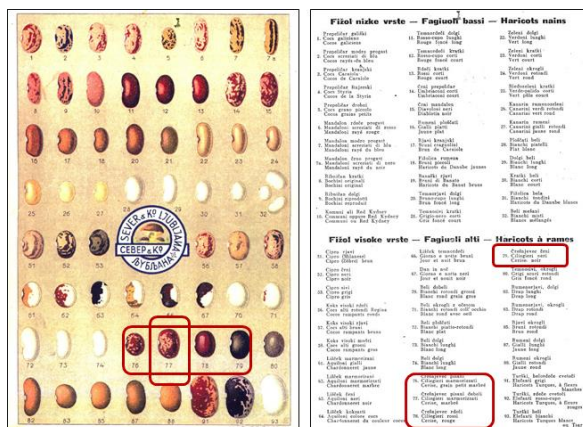
- 16 Češnjavec accessions and 23 accessions of landrace Lišček were selected from the gene bank at AIS.
- Field studies were conducted in three successive years; plant growth, resistance to diseases and pests were evaluated and the yield was determined. The chemical composition of raw seeds and sensory analysis was performed.



➤ Two new varieties inscribed in the List of varieties as conservation varieties:

Češnjavec pisani visoki

Lišček rdeči marmorirani





'Ljubljanska ledenka'



Ljubljanska ledenka is an old Slovene autochthonous variety that originates from Ljubljana and its surroundings. In 19th century it was spread to Austria and to Czech Republic. It is considered as an 'umbrella variety' and some of the varieties derived from it are included in the Common Catalogue of Varieties (CCV) of the EU under synonyms 'Laibacher Eis' 2, 3 and 4, with characteristic red leaf edge.

Based on the results of analyses of >150 lettuce accessions from the Slovene Plant Gene Bank and other gene banks around the world it was possible to select some accessions of the variety Ljubljanska ledenka which differed from all other varieties. Furthermore, one variety was inscribed in the National list of Varieties as well as in the Common Catalogue of Varieties of Vegetable Species of the EU under the name Ljubljanska ledenka.

'Laibacher Eis 2' (Batavia rubia de borde rojo 2,..)



'Laibacher Eis 3' (Blonde a borde rouge 3,..)



'Laibacher Eis 4' (Grazer Krauthauptel 4, Laibacher Eis 4).



ECPGR WG members

- *Allium*: Mojca Škof
- Cucurbits: Anton Ivančič
- Fibre Crops: Andreja Čerenak
- Forages: Vladimir Meglič, Jure Čop
- Grain Legumes: Vladimir Meglič
- Leafy vegetables: Jelka Šuštar Vozlič, Kristina Ugrinovič
- *Malus/Pyrus*: Metka Hudina, Gregor Osterc, Boštjan Godec
- Medicinal and Aromatic Plants: Dea Baričevič, Nataša Ferant
- Potato: Peter Dolničar
- *Prunus*: Valentina Usenik, Gregor Osterc, Metka Šiško
- *Vitis*: Radojko Pelengič, Stanko Vršič
- Wheat: Vladimir Meglič, Primož Titan
- Wild species Conservation: Andreja Čerenak, Darinka Koron
- On-farm conservation: Nataša Ferant, Joži J. Jerman
- Documentation/Information: Vladimir Meglič, Joži J. Cvelbar