



# 5MPCW CY-2025

## Conservation, Protection and Valorization Efforts of Plant Agrobiodiversity in Sardinia

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Biodiversità Sardegna

Agris

Agencia pro sa chircia in agricultura  
Agencia regionale per la ricerca in agricultura



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Consiglio Nazionale delle Ricerche  
ISPA  
ISTITUTO DI SCIENZE DELLE PRODUZIONI ALIMENTARI

Sustainability  
and  
Resilience

Regional  
Register of  
Agrodiversity

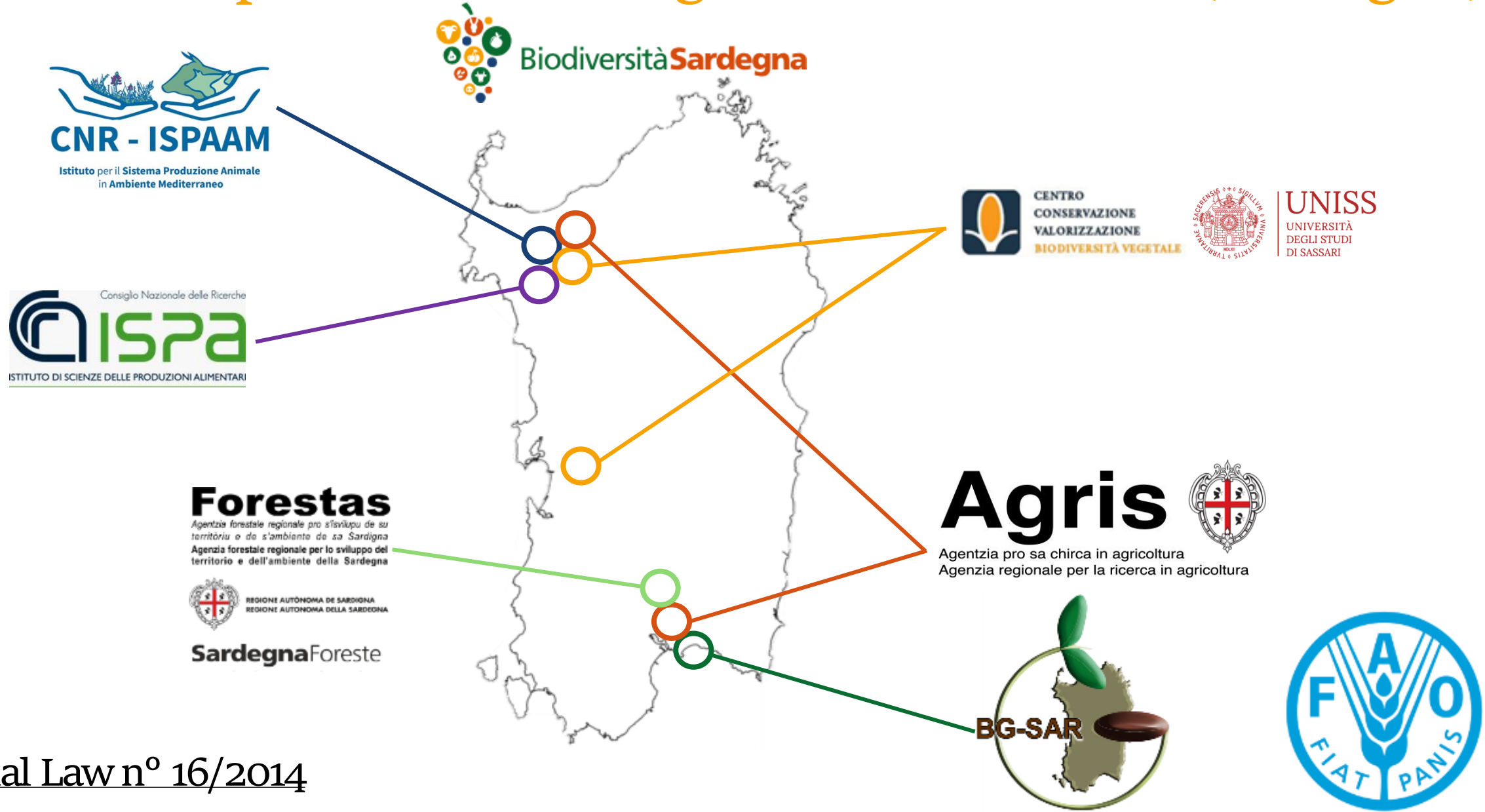


## Agrodiversity in Sardinia

Conserve *ex situ*  
the genetic  
resources

BRGAgriS

# Regional Germplasm Bank for Agriculture and Food (BRGAggris)



Regional Law n° 16/2014



# Agris Sardegna

## Agricultural Research Agency of Sardinia

# Agris

Agenzia pro sa chirca in agricultura  
Agenzia regionale per la ricerca in agricultura



The Agricultural Research Agency is the institution of the Sardinian Region dedicated to agricultural research and experimentation. It manages *ex situ* conservation fields spread across the island of Sardinia.

Main objectives of Agris: collection, multiplication and management of the fruit germplasm belonging to the main fruit species. Agris preserves approximately 500 varieties lots by 10 different species.



- Clonal collection of Spinoso Sardo, Violetto di Samassi artichoke (141 clones) and Sardinian grape varieties (120 clones or potential clones), with selection of the best plants for propagation and planting in the following year.
- In vivo conservation of local varieties of herbaceous species (potato, garlic, shallot).
- Morpho-phenotypic characterization of local varieties, aimed at their registration in the regional agrobiodiversity register.
- Mass and virus free selection of the best vines for clonal selection.
- Genetic, chemical and oenological characterization of sardinian grape varieties, aimed at their registration in the national italian register of grape varieties.
- *Ex situ* conservation of sardinian varieties of grapes and wildgrapes.
- Planning and management of research projects focused on the enhancement of local genetic resources.





# Sardinian Germplasm Bank (BG-SAR)



BG-SAR is a facility belonging to the University of Cagliari (Italy), founded in 1997.

Main objectives of BG-SAR: collection, multiplication and management of the germplasm belonging to rare, threatened and endemic *taxa* and/or with agronomic/cultural interest.

BG-SAR preserves approximately 3500 seed lots by 1350 different *taxa*.



# Sardinian Germplasm Bank (BG-SAR)



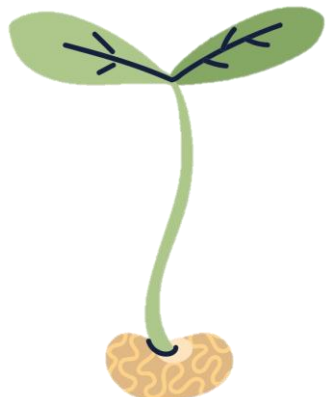
Agrodiversity genetic resources currently stored at BG-SAR:



More than 100 accessions

More than 60 preserved native varieties

More than 40 varieties of *Phaseolus vulgaris* L.



# Interdepartmental Centre for Plant Biodiversity Conservation and Enhancement (CBV)



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## Arboreal species

Regional germplasm collections have been established and conserved *ex situ* with Italian and international reference genotypes. Studies have focused on various species, including opuntia, fig, grapevine, orange, pear, and olive. Genomic analyses have been conducted on 30 olive cultivars (WGS re-sequenced) and 85 Cannonau clones (de novo sequenced) to enhance understanding of genetic diversity, relationships with reference cultivars, and conservation strategies (further details in Posters #3 and #46, Session II).



# Interdepartmental Centre for Plant Biodiversity Conservation and Enhancement (CBV)



## Herbaceous species

Since the early 2000 > 250 accessions of 32 different species - including cereals, pulses and horticultural species - have been collected and are conserved *ex situ* at CBV.



The largest collections include common bean (148 accessions), tomato (71), onion (33), faba bean (28) and chickpea (18). Common bean ([more details in Poster #35\\_Session I](#)) and tomato have been thoroughly characterized using genomic, metabolomic, and both classical and precision phenotypic data.

# Institute for Animal Production System in Mediterranean Environment (ISPAAM)



- ✓ Valorization and evaluation of genetic resources of forage interest or multiple uses.



From germplasm collection to bio-agronomic evaluation field trials.

- ✓ The seed collection includes around 600 accessions belonging to 64 species and 27 genera of the main botanical families Fabaceae, Poaceae, Asteraceae and Plantaginaceae, mainly isolated from the Sardinian flora.



# Institute of Sciences of Food Production (ISPA)

- ✓ Food Quality and Safety:
  - analysis of mycotoxins, toxigenic fungi, pathogenic microorganisms, and allergens
  - development of innovative methods for food safety control

- ✓ Conservation of Agricultural Diversity:
  - study and protection of Sardinian fruit and crop varieties
  - germplasm bank and cloning programs



- ✓ Innovation and Technology Transfer:
  - collaboration with agri-food companies
  - support for sustainable production





Community for the Protection and Food of South-Western Sardinia

Collaborate with professionals and custodian farmers

*In situ*  
conservation

BRGAgriS

Ensure the availability of these materials

Breeding programs and resistance to biotic and abiotic stresses

Protect local varieties from genetic erosion



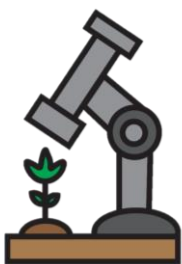
Continuous monitoring system of conserved resources



Availability for local farmers, future generation and recovery



Synergies between research, sustainable agriculture and local communities



Regional reference for the conservation and valorisation of plant genetic resources

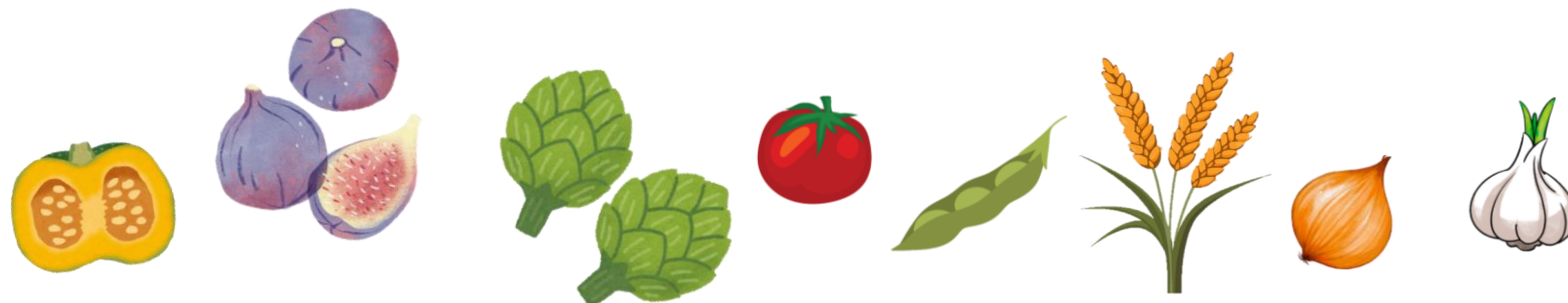


*Allium cepa* L. (Chibudda de 'Anari)



# 5MPCW CY-2025

Thank you for your attention



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