



02 - 03
APR
2025

WORKSHOP

Advancing Berry Breeding:
From Phenotyping to Genomic Innovation



Marche Polytechnic University, Ancona, Italy
Department of Agricultural, Food and Environmental Sciences (D3A),
AULA MAGNA



Also accessible online



Pre-breeding strategies for obtaining new resilient and added value berries

BRUNO MEZZETTI

BreedingValue Coordinator on behalf of the project partners.
Department of Agriculture, Food and Environmental Sciences
Università Politecnica delle Marche, Ancona (IT)

Email: b.mezzetti@staff.univpm.it

Highly Cited
Researcher
2019



Highly Cited
Researcher
2020



Highly Cited
Researcher
2021

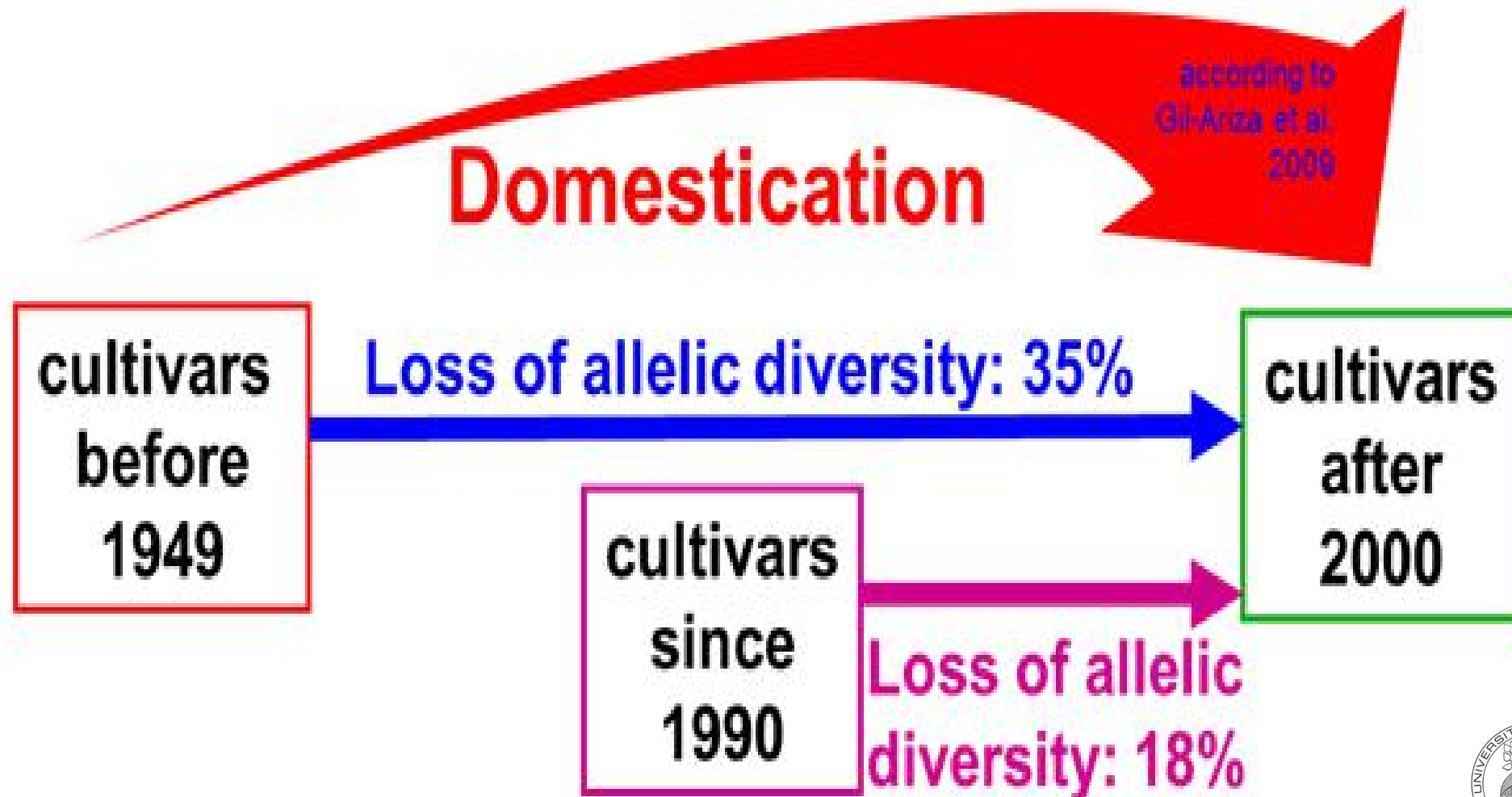


Funded by
the European Union



WHY IS THE BREEDING VALUE PROJECT IMPORTANT:

Loss of allelic diversity in a study for strawberry by Gil-Ariza et al., 2009.

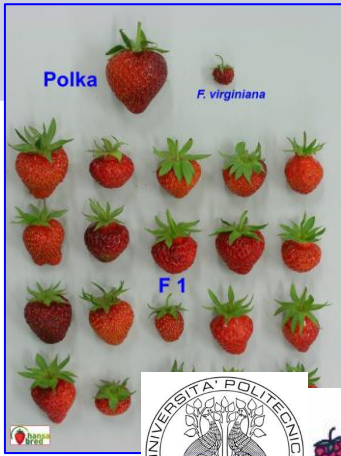


Aim of BreedingValue:

- Investigation of the domestication effect by determination of allelic diversity and answering the question: How resilient is our breeding base for future breeding?
- **Germplasm included in the first project period per germplasm category and genus – Klaus Olbricht - Hansabread**
- Definition of plant categories and identifying the relevant GenRes available for strawberry.

- **Total (Cat. 1 - Cat. 5): 1735**

Plant category 1	Plant category 2	Plant category 3	Plant category 4	Plant category 5	Plant category 6
Old cv. (until 1960)	Modern cv. (1960-2005)	Newest (released) cv. (2005 till now)	Pre-breeding (advanced selections)	Related Species	Populations
N. 188	N. 312	N.144	N. 1019	N.72	N. 27



How to characterize a new cultivar?



Increasing Value of EU Berry Genetic Resources

Project Management

Genetic Resources

- Selected accessions
- Breeding material and populations
- Replicated trials in field, tunnel and greenhouse

Genotyping

- Marker-assisted selection
- Genomic selection
- Marker-Trait associations

Phenotyping

- Fruit quality and resilience
- Plant architecture
- Image analysis
- Metabolomics
- Panel sensory tests

Consumer science

- Survey and focus groups
- Definition of sensory profiles
- Consumer tests

Data Management
and Analysis

Sharing Technologies

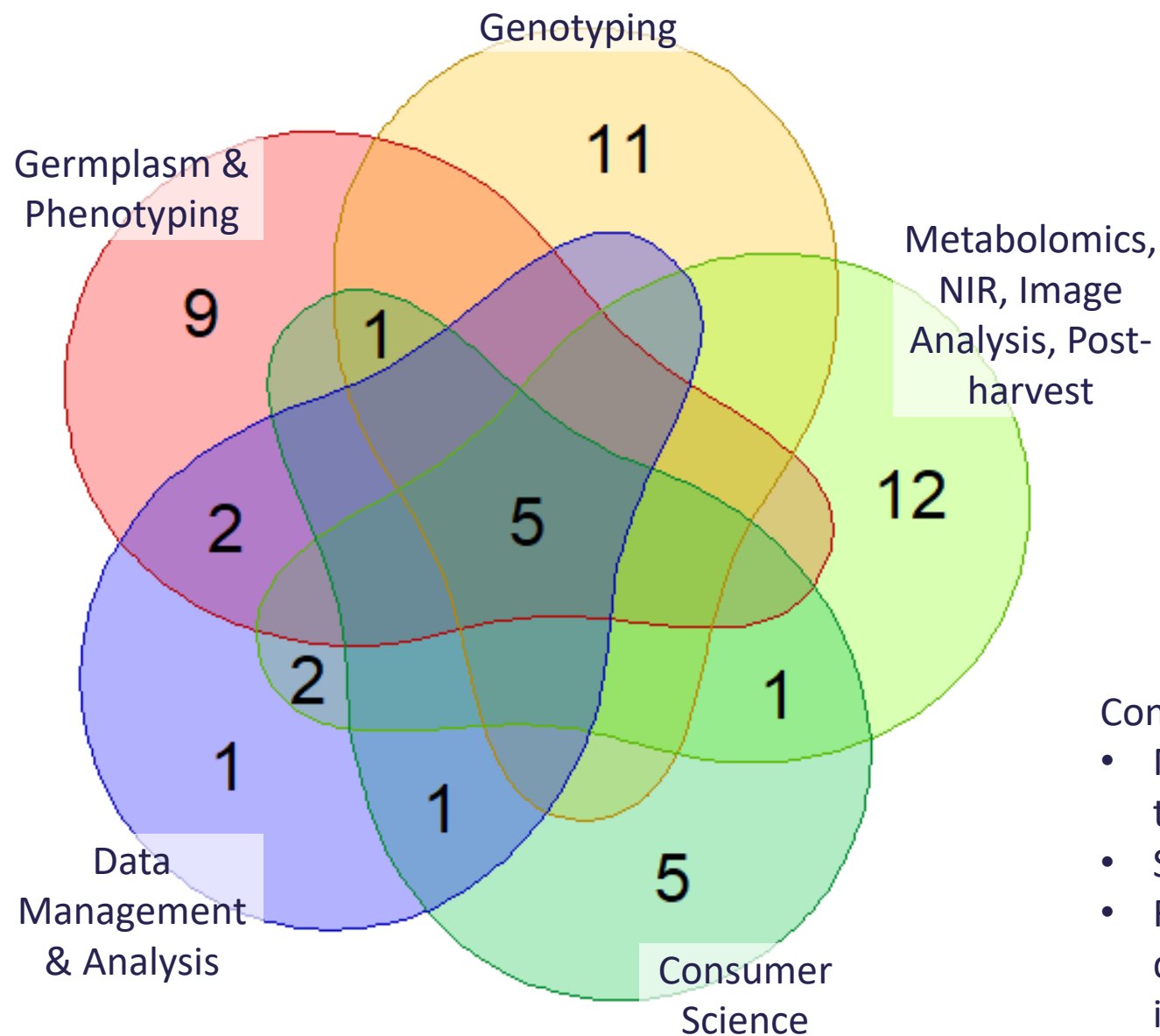
IP Management

User-friendly
Communication

Berry Pre-Breeding Material for EU-Companies and Consumers



Publications per WP



In total: 50 publications including

- Article in journal
- Chapter in a book
- Conference proceedings
- Non-peer-reviewed publication
- Non-scientific publication

Conclusions:

- Most publications from work packages (WP) that generate high number of datasets
- Some publications involving all work packages
- Few publications that combine datasets from different work packages, in particular involving work package “Data management & analysis”





- Organisation of or Participation to a scientific event, workshop or training
- Exhibition or Trade fair
- Brokerage event
- Pitch event
- Communication campaign (e.g. TV)
- Press release
- Social media
- Website
- Flyers
- Video / Film

- Most disseminations from work packages (WP) that are in contact with growers, breeders, stakeholders or consumers
- Many disseminations involving all work packages, e.g. general presentation of project activities
- Few disseminations that combine activities from different work packages

The BreedingValue website has had **74.097 visitors** so far - peaks at open call submission, progress meetings and project events (e.g. workshops, dissemination events, webinar)



Website visitors Jan. 2021-March 25, 2025: **in total 74.097** (39.645 in Febr. 2024)

