



ECPGR SECRETARIAT INVOLVEMENT WITH EU HORIZON PROJECTS

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ECPGR Secretariat

*18th ECPGR Steering Committee
02 June 2026, Tbilisi, Georgia*



Horizon projects with ECPGR involvement in Phase XI

2020–2025

AGENT (RIA, H2020)




AGENT: Using genebank genomics to bridge the gap between conservation and breeding

AGENT project partners



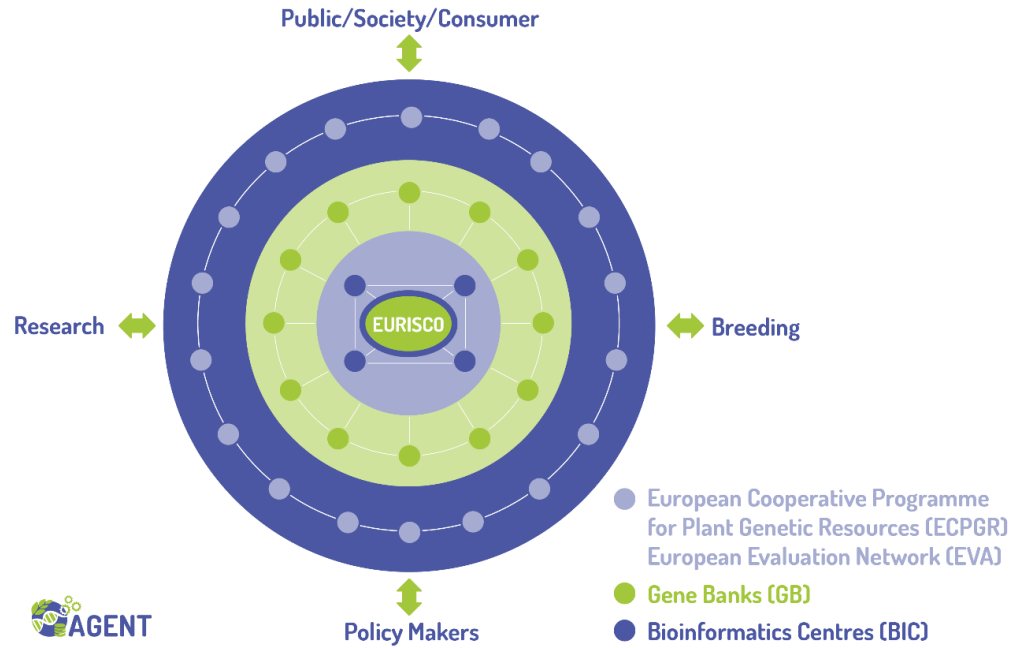
**NARDI
FUNDULEA**

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Département fédéral de l'économie,
de la formation et de la recherche DEFR
Agroscope



Facts and goals



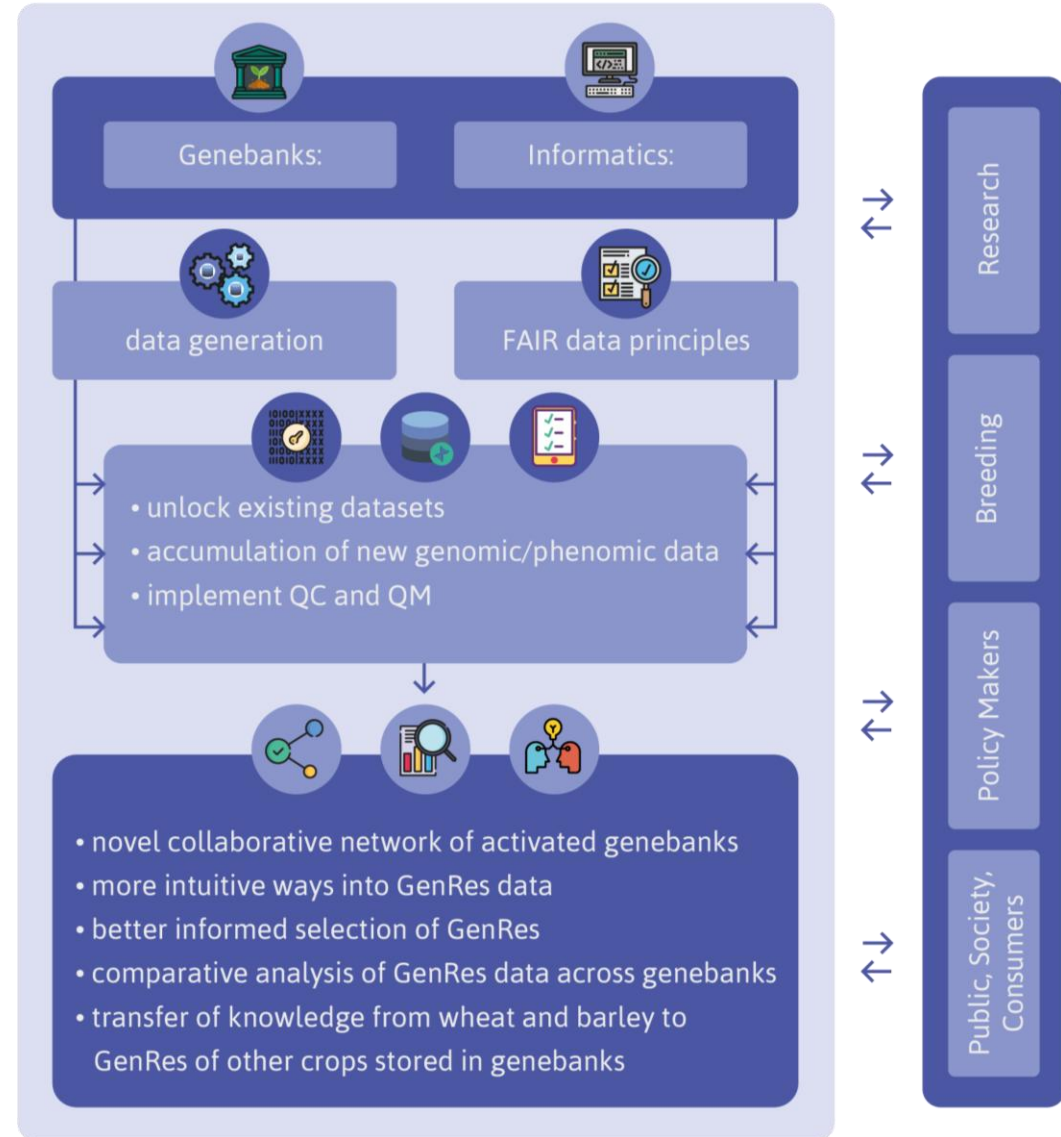
DURATION
5 Years

FUNDING
7 Million €

18 PARTNERS
15 Countries

www.agent-project.eu

AGENT - Activated GEnebank NeTwork



AGENT genebanks created wheat and barley collections for phenotyping and genotyping

AGENT collections:

- **Precision:** unique accessions (~12,000)
- **Bridging:** potential duplicates (~2,000)
- **Standard checks:** commercial varieties (200)

Agronomic traits phenotyped:

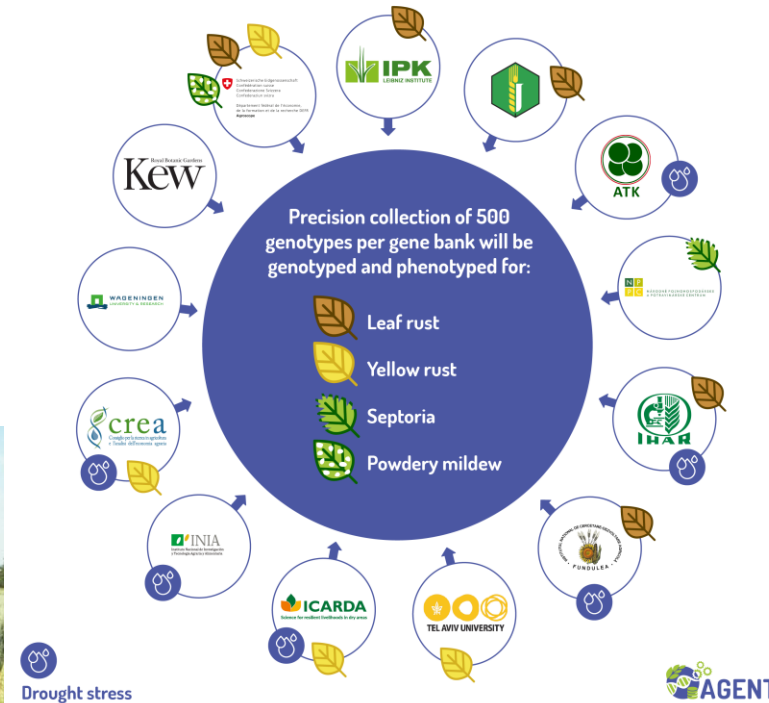
- Plant height
- Flowering time
- Thousand-kernel-weight (TKW)



AGENT genebanks collected phenotypic data for genomic association and prediction

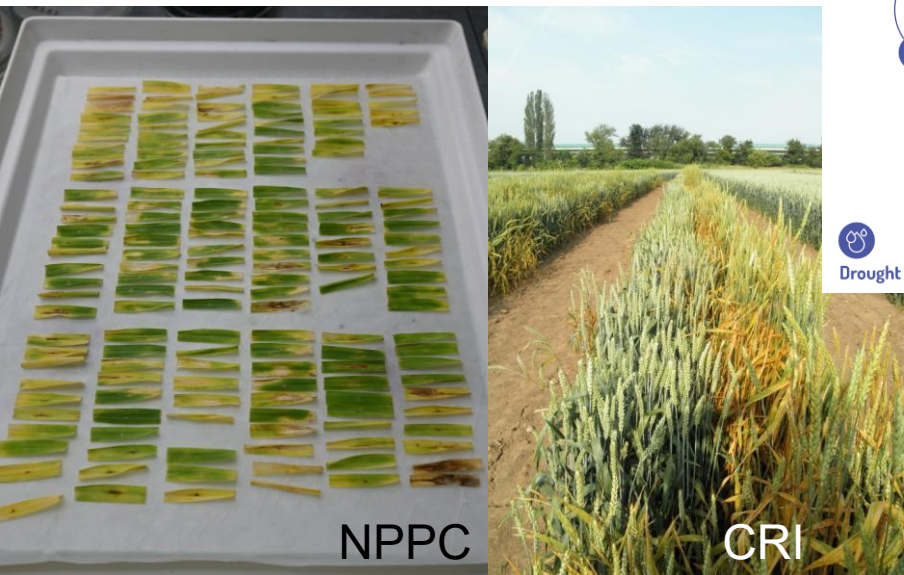
Biotic stress:

- Various fungal diseases



Abiotic stress:

- Drought – in select locations



Historic data from genebank collections collected over multiple decades

Data												
Wheat	acn	40s	50s	60s	70s	80s	90s	00s	10s	20s	years	decades
CREA	1707	-	-	-	-	-	-	+	+	+	14	3
CRI	4534	-	+	+	+	+	+	+	+	-	40	7
ICARDA	1654	-	-	-	-	-	-	-	+	+	4	2
IHAR	7607	-	-	+	+	+	+	+	+	+	27	6
INIA	1260	-	-	-	-	-	+	+	+	-	22	3
IPGR-Sadovo	504	-	-	-	-	+	+	+	+	+	30	5
IPK	12754	+	+	+	+	+	+	+	+	-	70	8
NARDI	86	-	-	-	-	+	+	+	+	+	29	5
NPPC	5764	-	-	-	+	+	+	+	+	+	38	6
WBF	699	+	+	+	+	+	+	+	+	+	55	9
WR	2239	-	-	-	-	+	+	+	+	+	17	5

Data												
Barley	acn	40s	50s	60s	70s	80s	90s	00s	10s	20s	years	decades
CRI	515	-	+	+	+	+	+	+	+	+	65	8
ICARDA	3	-	-	-	-	-	-	-	+	-	3	1
IHAR	2626	-	-	-	+	+	+	+	+	-	18	5
IPGR-Sadovo	610	-	-	-	-	-	+	+	+	-	11	3
IPK	12876	+	+	+	+	+	+	+	+	-	70	8
NARDI	944	-	+	+	+	+	+	+	+	+	52	8
NPPC	1569	-	-	-	+	+	+	+	+	-	28	5
WR	2047	-	-	-	-	+	+	+	+	+	15	5

- Data collected since the 1940s:
 - Plant height
 - Flowering time
 - 1,000 kernel weight

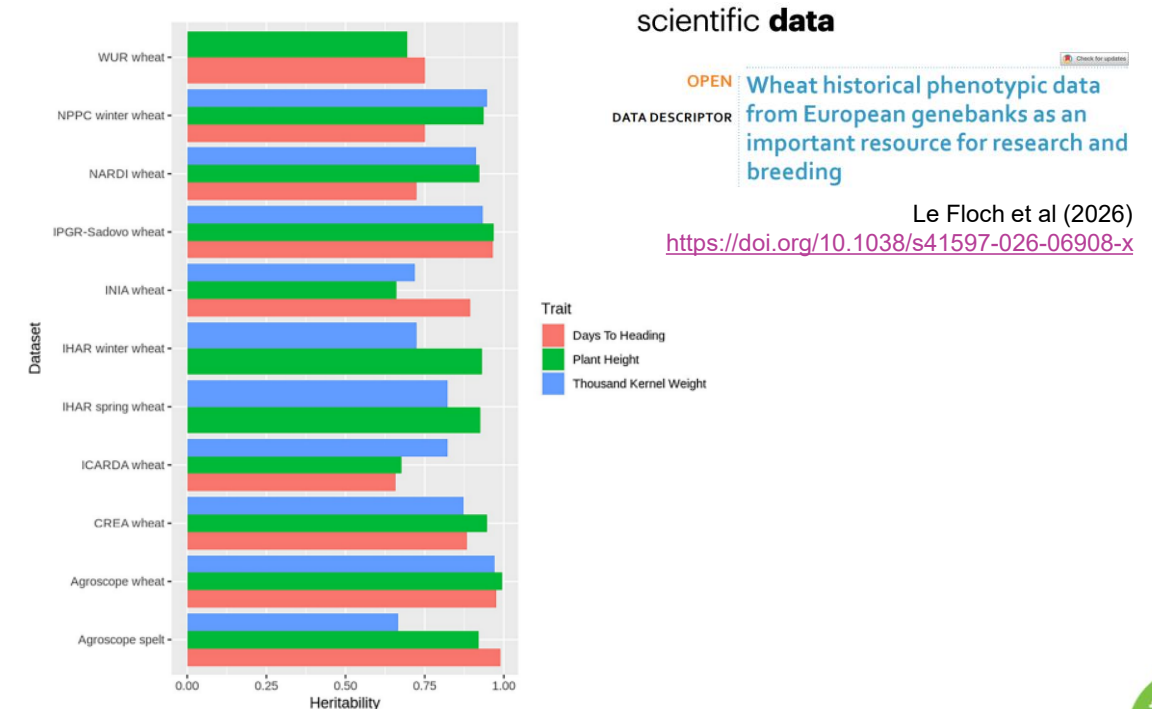
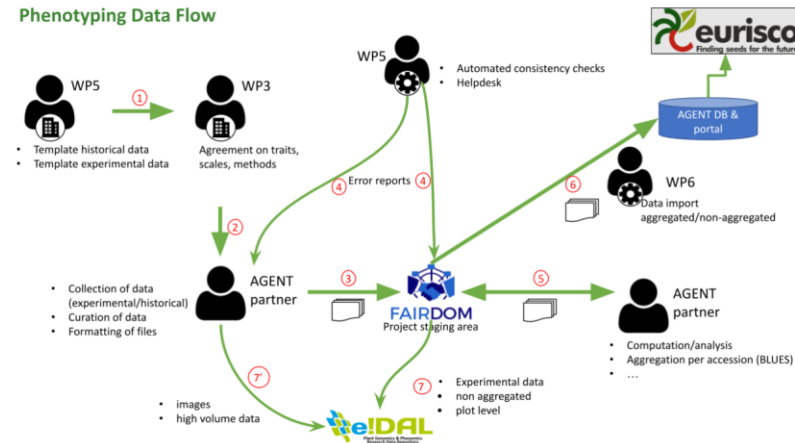


Fig. 5 Heritability estimates of days to heading, plant height, and thousand kernel weight, for each genebank.

AGENT tools for genebank management



- Data management **guidelines** for phenotypic and genotypic data
- **Standard templates** for data collection
- Data **curation** guides and **validation** tools
- AGENT **data portal**
- Data **analysis** tools and pipelines



AGENT About Partners Activated Genebank Network News & Events Publications AGENT data portal

Webinar series 2025

What are the advancements made in data collection and processing in the AGENT project? Have a look at our webinars, where project partners showcase the innovative tools and solutions developed during the project.

Webinar 3: The AGENT data validator
Mathijs Broeze (VRI), Cyril Potvinier (IRAD) & Erwan Le Floch (IRAD)
5 February 2025

The AGENT data validator

Download for presentation

Webinar 2: Introduction to the AGENT API
Mathijs Broeze (VRI), Mathias Lange (SPI) & Joseph Ruff (IBDGI)
20 January 2025

Introduction to the AGENT API

Download for presentation

AGENT

Home

About the AGENT portal

The AGENT portal provides the central entry point to all data collected in the frame of the AGENT project.

Material providers	Accessions total	Original genebank accessions
14	77560	63770
SSD lines	AGENT IDs	Collections
13574	63846	17



AGENT genebank peer reviews



Task led by T. van Hintum

1st cycle		
Genebank	Location	Visit
CARC	Prague, Czech Republic	12-13 May 2022
IPK	Gatersleben, Germany	19-20 July 2022
NPPC	Piešťany, Slovakia	23-24 August 2022
2nd cycle		
Genebank	Location	Visit
INIA	Madrid, Spain	7-8 July 2022
CGN	Wageningen, Netherlands	19-20 July 2022
IPGR Sadovo	Sadovo, Bulgaria	6-7 Oct 2022
3rd cycle		
Genebank	Location	Visit
NordGen	Alnarp, Sweden	28-30 June 2023
MSB/Kew	Ardingly, UK	5-7 July 2023
CGN	Wageningen, Netherlands	20-22 September 2023
4th cycle		
Genebank	Location	Visit
WBF/Agroscope	Nyon, Switzerland	25-26 September 2024
CREA-CI	Vercelli, Italy	23-24 September 2024
IHAR-PIB	Radzików, Poland	21-23 September 2024

- All **Review reports** available here:

<https://www.ecpgr.org/aegis/aquas/peer-visits>

- **Genebank manuals** updated and available on AEGIS website:

<https://www.ecpgr.org/aegis/aquas/genebank-manuals>



Genetic
Resources

ORIGINAL ARTICLE

Genetic Resources (2025), 6 (11), 115–121
DOI: [10.46265/genresj.OADZ7911](https://doi.org/10.46265/genresj.OADZ7911)
<https://www.genresj.org>
ISSN: 2708-3764

Genebank Peer Reviews: A powerful tool to improve genebank quality and promote collaboration

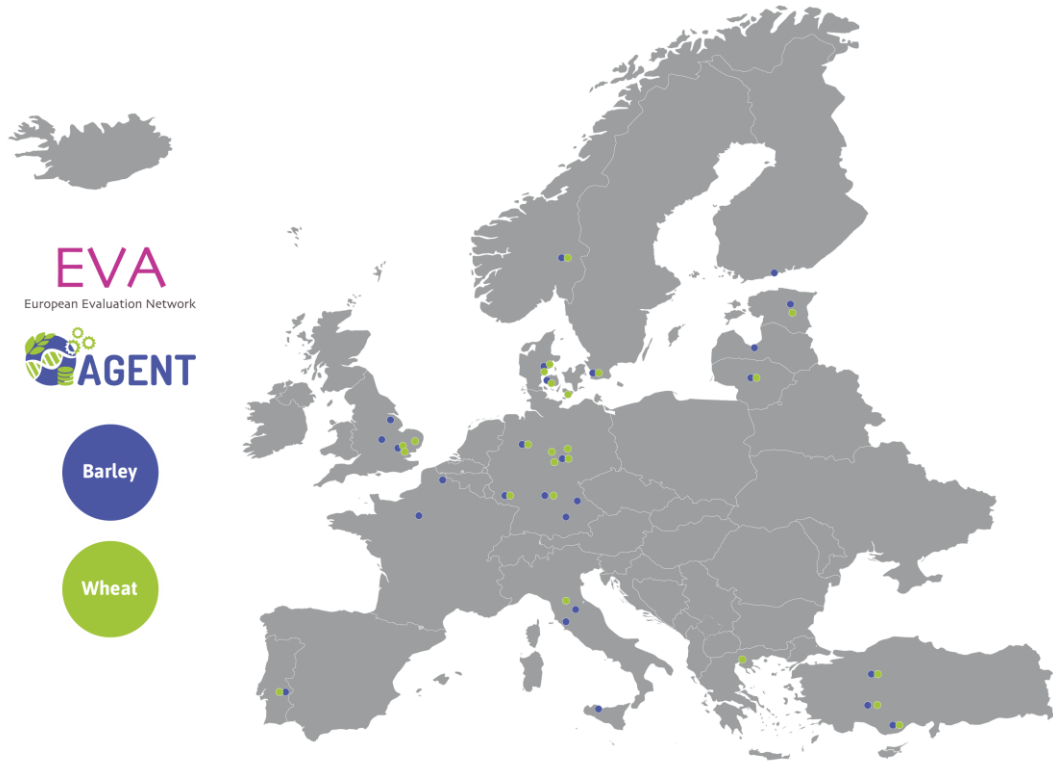
Theo van Hintum^a, Sharon Balding^b, Gergana Desheva^c, John Dickie^b, María José Díez^d, Luis Guasch^e, Pavol Hauptvogel^f, Vojtěch Holubec^g, Dagmar Janovská^g, Ulrike Lohwasser^h, Isaura Martín^e, Ludmila Papoušková^g, Beate Schierscher-Viretⁱ, Lise Lykke Steffensen^l, Katya Uzundzhaliyeva^c, Patrizia Vaccino^k and José Vicente Valcárcel^d

<https://doi.org/10.46265/genresj.OADZ7911>



ECP/GR

Stakeholder engagement: Evaluations of AGENT accession by EVA Wheat and Barley



- ~1200 AGENT SSDs from precision collection were evaluated by partners in EVA Wheat and Barley network
 - Multilocation trials across Europe
 - Focus on biotic stress traits
 - Using standard protocols

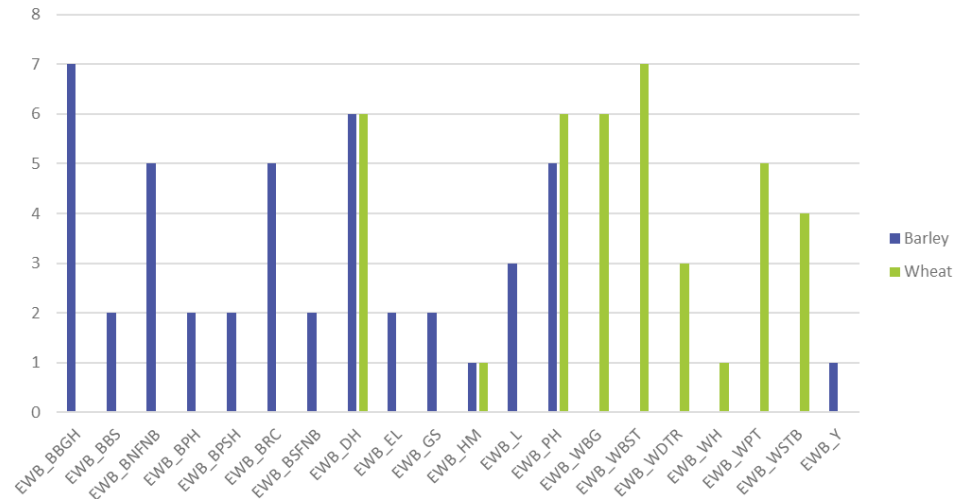
Task led by S. Goritschnig



Overview of collected data

Number of trial locations

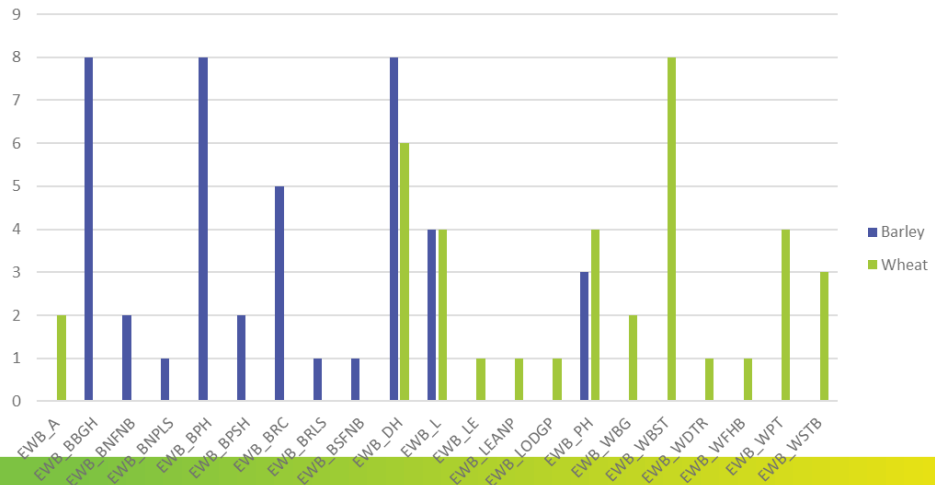
Nordic zone trials



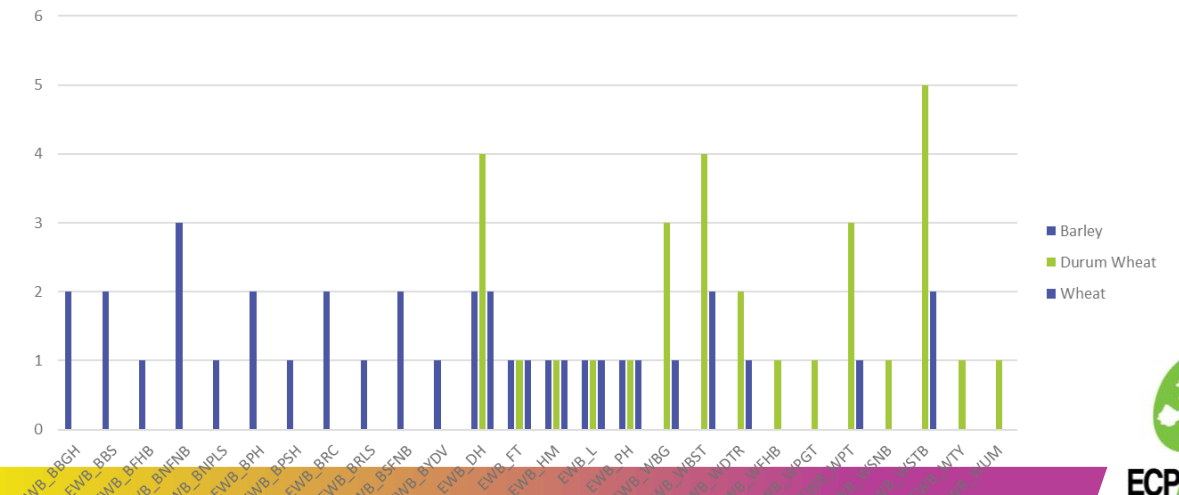
Nordic zone
Central zone
Southern zone
Farmers' network



Central zone trials



Southern zone trials



AGENT key outputs



Key exploitable results:

1. **Germplasm** - characterized precision collections
2. **AGENT Web portal** - phenotypic & genotypic data availability and exploitation
3. **Tools for data curation** – FAIRification Framework
4. **Tools for data analysis** - statistical pipelines, linkages GxP
5. Pan-European genebank **phenotyping network**



Genetic
Resources

Genetic Resources (2025), (S2), 119–134
REVIEW AND POSITION PAPER DOI: 10.46265/genresj.LUZJ7324
<https://www.genresj.org>
ISSN: 2708-3764

Strengthening European research cooperation on plant genetic resources conservation and use

Sandra Goritschnig^{a,c}, Stephan Weise^b, Filippo Guzzon^a, Lorenzo Maggioni^a, Theo Van Hintum^c, Lise Lykke Steffensen^d, Nils Stein^{b,e} and Giovanni Giuliano^f

<https://doi.org/10.46265/genresj.LUZJ7324>



Promote further exploitation and development through ECPGR networks

Panel discussion (Versailles, 2025): Fostering collaboration for sustainable agriculture. Assessing the impact of joint efforts in PGR management





COL BRI

Collaborative Crop Breeding Research
and Innovation for a Green Europe



COLiBRI: Collaborative Crop Breeding R&I for a Green Europe



Horizon Europe 2025 Cluster 6/Farm2Fork CSA Call: Strengthening the EU crop breeding research and innovation ecosystem for competitive, resilient, and sustainable agriculture

Project duration: 1 June 2026 – 31 November 2028

Coordination: Julius Kühn-Institute, Germany

Consortium: 17 partners across public research, breeders, networks, farmers, infrastructures, policy actors

JKI | PlantETP | EPSO | INRAE | Euroseeds | Wageningen University and Research | Aarhus University | ECPGR | Polish Seed Association | Polish Seed Testing Authority | ICROFS | National Institute of Biology (SI) | Forum of Professional Farmers and Processors of Romania | Technical University Graz | Institute of Food Biotechnology and Genomics (UA) | Hungarian Research Institute of Organic Agriculture – ÖMKi | International Centre for Advanced Mediterranean Agronomic Studies

A Coordination and Support Action (CSA) is a non-research funding action under Horizon Europe that supports cooperation, networking, capacity building, dissemination, and policy alignment without carrying out research or technological development itself.



COLiBRI objectives



1. Engage Relevant Stakeholders

- Build an EU-wide plant breeding R&I community.
- Integrate needs of researchers, breeders, farmers, industry, policymakers, and consumers.



2. Identify Priorities & Gaps

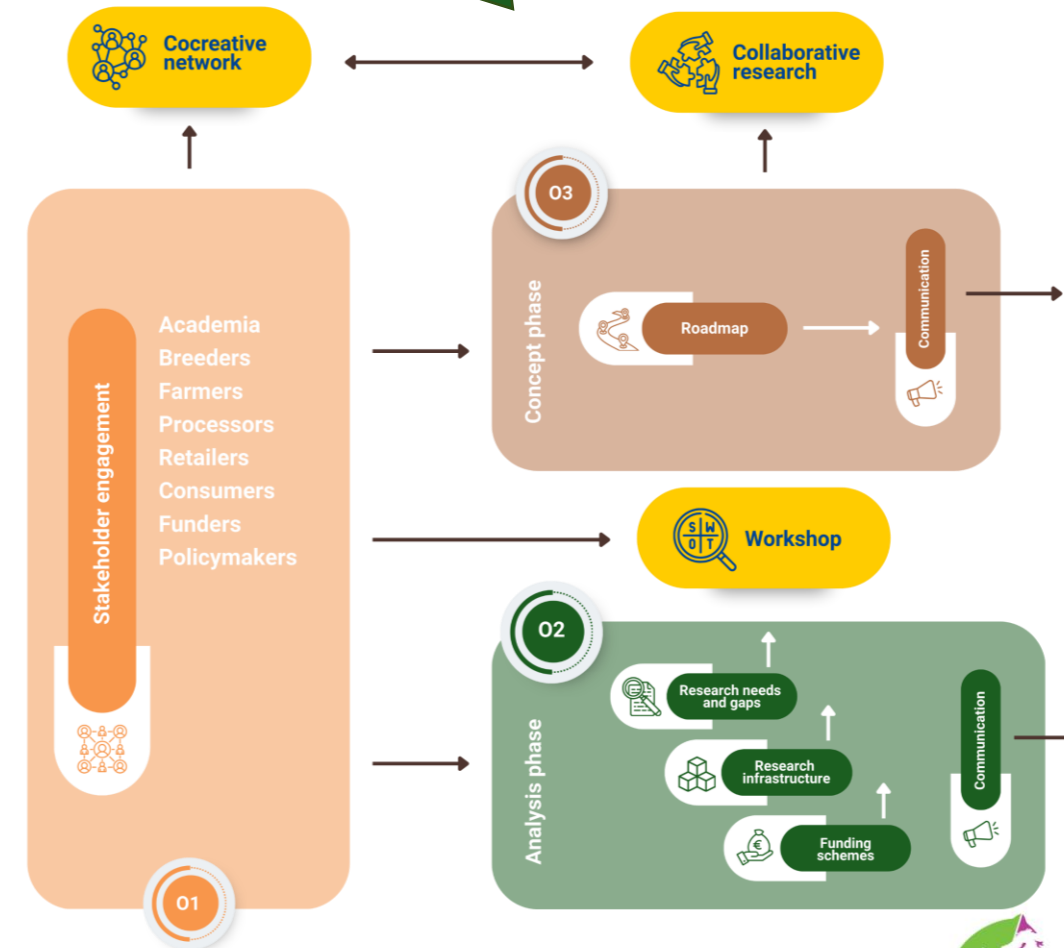
- Map research gaps, technological bottlenecks, and infrastructure needs.
- Cover all breeding systems (incl. diverse production systems, crops and technologies).
- Propose innovative, long-term funding models for the full breeding cycle.



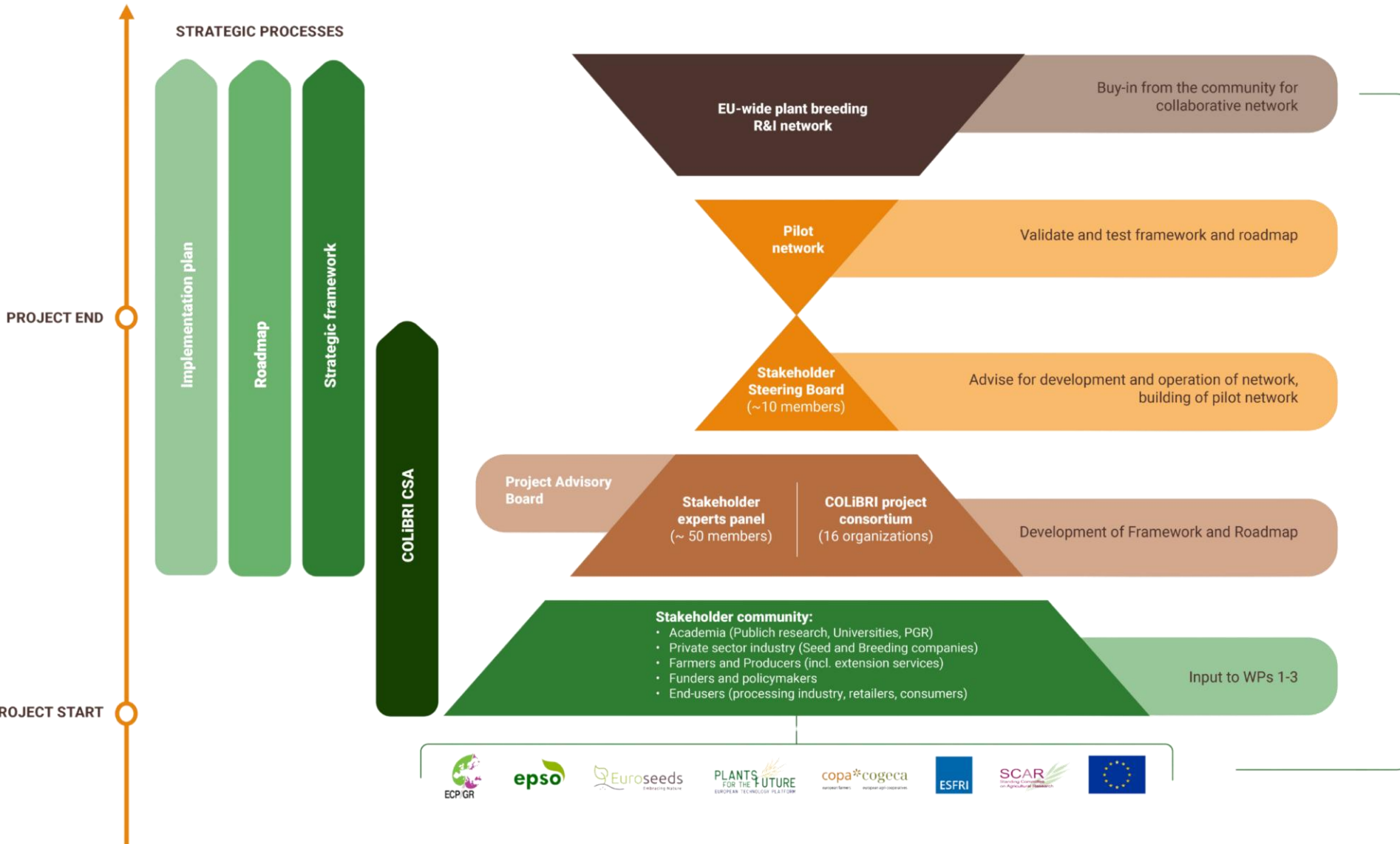
3. Design a European Collaboration Framework

- Establish governance and a sustainable funding network.
- Accelerate development of improved crop varieties aligned with EU strategic goals.
- Stronger breeding ecosystem, better funding alignment, faster innovation transfer, SME support.

Develop a **European roadmap and implementation strategy** for a coordinated **plant breeding research & innovation (R&I) funding network**, uniting public and private sectors.



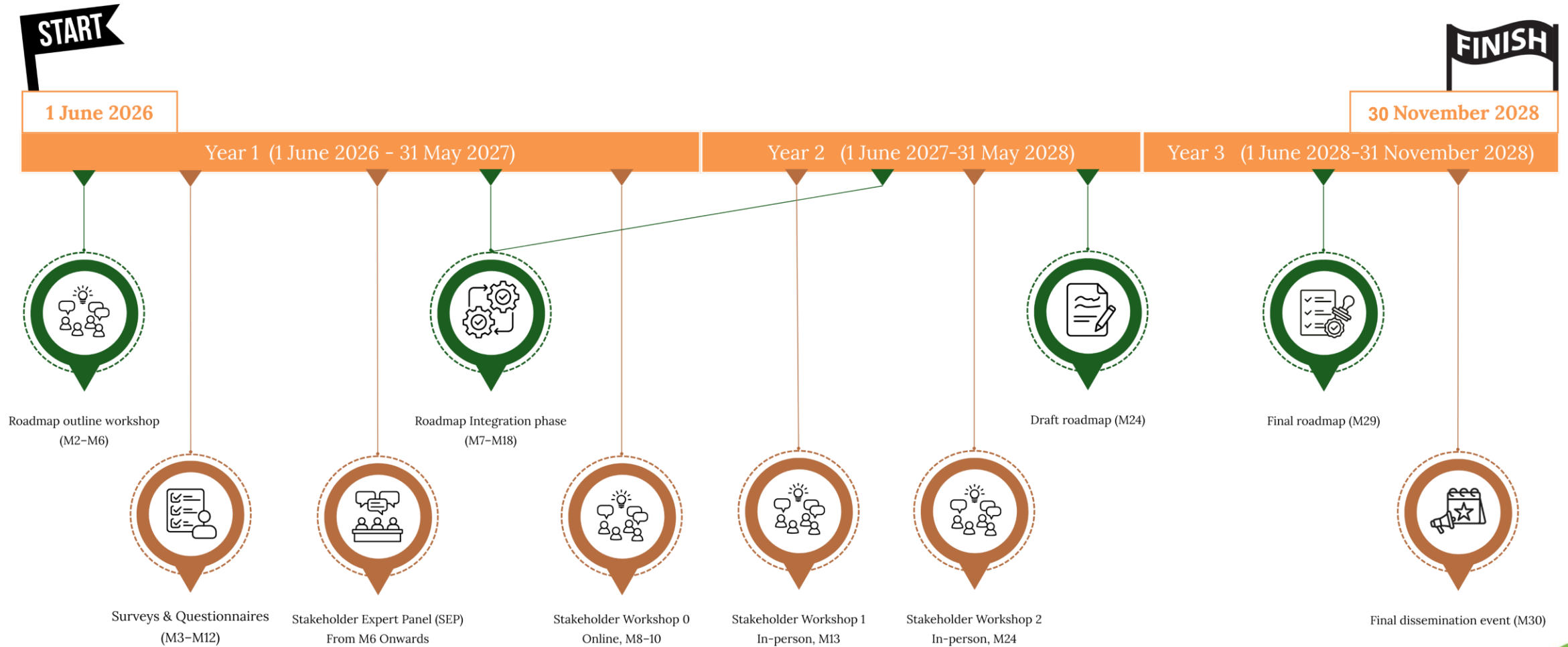
EU-wide plant breeding R&I network



Stakeholders, LoS




Project timeline



The Role of ECPGR in COLiBRI

Project start:
June 2026

- Joint lead of **WP4 – Stakeholder engagement**
 - Communications and project website
 - Organization of **Stakeholder Workshop 2 – June 2027, Rome**
- ECPGR community to engage in analytical surveys and stakeholder fora
 - SC member on the Stakeholder expert panel (SC Task force?)
 - Leverage experience from Pro-GRACE in engaging with policymakers and PGR practitioners

Placing PGR firmly as the foundation of agrifood R&I
ECPGR as critical network for conservation of genetic diversity

Proposals and new opportunities

- **Unsuccessful Proposals**

- HORIZON-CL6-2024-BIODIV-02-3-two-stage: [Promoting minor crops in farming systems](#)
- HORIZON-CL6-2025-01-BIODIV-02-two-stage: [Breeding for resilience: enhancing multi-stress tolerance in crops](#)

- **Submitted Proposal**

- HORIZON-CL6-2026-02-FARM2FORK-04: [Accelerating the development of breeding tools for perennial crops, specifically fruits and nuts](#)

- **Future calls**

- HORIZON-NATURE-2027-02-02: Living labs for co-creating solutions for the restoration of ecosystems addressing implementation bottlenecks and improving resilience to risks

- Explore opportunities to contribute to exploitation of project results
- Promote project communication & dissemination via ECPGR channels

A collection of fresh vegetables and fruits including carrots, tomatoes, basil, and walnuts. The items are arranged on a light-colored surface, with some items like the tomatoes and walnuts in the foreground and others like the leafy greens in the background. The overall scene is bright and fresh.

THANK YOU

ECPGR Secretariat budget in Horizon projects

	Staff	Travel	Other services	Indirect costs/ OH	Sub-contract	Total
AGENT*	154,900 €	9,603 €		41,125 €	71,197 €	276,825 €
PRO-GRACE*	136,278 €	6,591 €	5,131 €	37,000 €		185,000 €
COLIBRI	107,225 €	5,600 €	80,200 €	48,256 €		241,281 €
TOTAL	398,403 €	21,794 €	85,331 €	126,381 €	71,197 €	703,106 €

* Numbers are those reported and final.