

WHEAT WG REPORT (2024–2025)

In preparation for the 18th Steering Committee Meeting, Tbilisi, Georgia, 2-4 June 2026

Compiled by WG Chair: Albrecht Serfling

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1. CONTRIBUTION TO ECPGR OBJECTIVES

1.1. Achievements and success stories

- To efficiently conserve and provide access to unique germplasm in Europe through AEGIS and the European Collection
n/a
- To provide passport and phenotypic information of actively conserved European PGRFA diversity ex situ and in situ through the EURISCO catalogue
n/a
- To improve in situ conservation and use of crop wild relatives
n/a
- To promote on-farm conservation and management of European PGRFA diversity
n/a
- To promote use of PGRFA
 - Genetic resources of wheat and barley evaluated for their resistance
 - Resistance loci in genome-wide association studies identified
 - Most resistant wheat and barley genotypes carrying possibly unknown resistances selected
 - Selected genotypes crossed in order to identify the genetic background of identified resistances using segregating populations

1.2. Gaps or constraints identified

Low repeatability of some traits due to regional differences or missing replications within trials
Delayed distribution of seeds to partners due to low amounts of seeds or logistical problems

2. GRANT SCHEME ACTIVITIES, WG MEETINGS AND EVA ACTIVITIES

- Ongoing Grant Scheme proposals (Phase X: submitted:2; approved:2)

- [BiDifferent](#) (Chances for the conservation and re-cultivation of central European club wheat (Binkel) through a nutritional and genetic differentiation towards other wheat species), in collaboration with On-farm Conservation and Management WG
- [INWHEATORY](#) (Inventorying wheat on-farm diversity), in collaboration with On-farm Conservation and Management WG
- Presentation of wheat and barley evaluation and association study results at Meeting of the GFPI Grain Division on November 5, 2025 in Bonn Germany- Discussion and planning of future proposals and cooperations with breeding companies
- Presentation during the meeting of the national EVA II expert group at the GFPI annual conference on November 5, 2024
- Presentation of evaluation results at 3rd International Wheat Congress, Perth, Australia, Sept 22- 27, 2024.
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- **Total number of partners involved in Grant Scheme: 26 from 15 countries**
 - ECPGR-funded: 18 from 12 countries
 - Self-funded: 8 from 3 countries
- **Meetings held**
 - BiDifferent
 - BiDifferent, Final Activity workshop, Ora, Italy, from 14-15 March 2024
 - EVA Wheat and Barley network meeting, 25-26 January 2024, Fiorenzuola d'Arda, Italy.
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- **Total number of partners involved in WG Meeting: n/a**
- **Reports and related data**
 - [BiDifferent final report](#)
 - [INWHEATORY final report](#)
 - [Summary report of the 2024 Annual meeting of the European Evaluation Network \(EVA\) for Wheat and Barley EVA Wheat and Barley](#)
 - Publication of marker data on barley and wheat resistance and results of association studies on resistance traits
- **Funds mobilized**
 - ECPGR granted funds: €33,715 (BiDifferent: €18,590 (1/2 of the total grant = €37,180); INWHEATORY: €15,125 (½ of the total grant = €30,250))
 - Inputs in-kind declared in Grant activities: €3,150 (BiDifferent: €3,150 (1/2 of the total in-kind contribution = €6,300); INWHEATORY: €0)

3. OTHER ACTIVITIES (CROSS-WORKING GROUP ACTIVITIES, LINKS WITH OTHER NETWORKS, PROJECTS AND INITIATIVES)

- **Cross-Working Group activities:** Evaluation of barley and detection of resistance loci in barley with the Barley WG
- **Others:** Comparison with evaluation and marker information from projects “Genbank 3.0” (funded by German Ministry of Education), “BrandResist” and RustHealth (funded by the German Ministry of Agriculture) due to overlapping genotypes.

4. WORKING GROUP DOCUMENTS AND PUBLICATIONS

- Serfling A, Pfrieme AK, Deblieck M, Krößmann J, Stahl A (2024). High-throughput evaluation of unknown rust resistances in genetic resources of wheat. Poster (247). 3rd International Wheat Congress, Perth, Australia, Sept 22- 27, 2024.
- Serfling A, Breitzkreuz, C, Krößmann J, Deblieck M, Pfrieme AK, Stahl A (2024). High-throughput evaluation of unknown rust resistances in genetic resources of wheat. Workshop presentation. 3rd International Wheat Congress, Perth, Australia, Sept 22-27, 2024.
- Pfrieme AK, Schulthess AW, Reif JC, Stahl A, Serfling A (2025). GeneBank3.0: Mapping and validation of leaf and stripe rust resistances from wheat genetic resources. Poster. Plant 2030 Status Seminar. Annual Meeting of Plant Research funded by BMBF

5. EXPECTED ADDITIONAL ACHIEVEMENTS AND FUTURE ACTIVITIES

- Further evaluation of genebank accessions
- Validation of results from a subset of the most resistant wheat and barley genotypes
- Generation of segregating populations in order to isolate resistance genes in the background of effective resistances
- Project proposals aimed at isolating the resistances found. Furthermore, the accelerated use of resistances in varieties should be made possible. Projects can be coordinated by the Wheat WG.
- Proposal in the frame of the ECPGR Activity Grant Scheme