

### **Newsletter Issue #4**



#### Welcome to the final issue of our BreedingValue Newsletter!

We enjoyed taking you along on our exciting journey as we developed innovative, sustainable, and competitive breeding strategies for resilient and high-quality berries while navigating the ever-present challenges such as climate change and environmental preservation.

With the BreedingValue project coming to an end, this newsletter edition will present you with the final highlights from our project activities, such as the exciting <u>launch of our results video</u>, some <u>insights and experiences from the Open Calls</u>, as well as <u>the latest scientific dissemination activities</u> and <u>publications</u> resulting from BreedingValue.

Let us reflect on the progress we have achieved together. Throughout the past four and a half years, BreedingValue has generated valuable data and information that laid the foundation to advance sustainable berry breeding across Europe. Our joint efforts have created a strong basis for future innovation in berry research.

Thank you to all partners and supporters who made this journey a success.

Best regards, Bruno Mezzetti

### **Launch of Results Video**



Over four and a half years, BreedingValue has mapped the genetic biodiversity of strawberries, blueberries, and raspberries, applied new advanced genotyping technology and phenotyping tools, developed innovative data tools, and established a framework aligning breeding with consumer needs.

In the results video our work package representatives share insights on progress, challenges, and the future impact on berry genetic diversity and breeding.

Discover how our collaboration is shaping genetic resource management!

Watch the video
(with subtitles in French, Italian, Spanish and Turkish)

# **Open Call Testimonials**



The involvement of and interaction with the breeding community was fundamental for the success of the BreedingValue project. We launched four Open Calls, that resulted in 14 projects, to involve further breeders. Now it was time to reflect on the opportunities the Open Calls offered.

Explore how the Open Call participants have enriched our project and vice versa by reading their Testimonials

### **Scientific Dissemination Activities**

### Final Outreach event at MACFRUT trade fair



After 4,5 years of research, the BreedingValue project presented its results at the MACFRUT trade fair which took place from May 6-9, 2025 at the Expo Center in Rimini, Italy. From the BreedingValue booth to a consumer study, testing the visual appeal and taste of berries, to a 90 mins workshop, and expert talks, the event was a major success on the way to creating tastier, more resilient berries for Europe.

Learn more

# Final project Workshop: "Advancing Berry Breeding: From Phenotyping to Genomic Innovation"



Early April 2025, BreedingValue hosted its final project workshop in Ancona, Italy, bringing together 120 participants to delve into the latest advancements in berry breeding. Discussions spanned from cutting-edge phenotyping techniques to the application of genomic tools in developing resilient and high-quality strawberries, blueberries, and raspberries.

The workshop also featured several organisations that had participated in the BreedingValue Open Calls, giving them the opportunity to share their experiences and outcomes.

Learn more

The workshop followed the final project meeting at which the results achieved during the last 4.5 years of BreedingValue were discussed.

Learn more







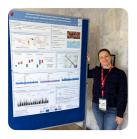
### X International Strawberry Symposium, China



From March 16-21. 2025. BreedingValue partners shared key project results at the X International Strawberry Symposium in Yancheng, China. From innovative breeding strategies to consumer-focused research, their presentations highlighted BreedingValue's global relevance and impact, sparking international dialogue on the future of strawberry cultivation.

Learn more

### 12th Rosaceae Genomics Conference, Barcelona



At the 12th Rosaceae Genomic Conference (RGC12) held in Sant Feliu de Guíxols, Spain, BreedingValue partners presented research results. Highlights included results related to identifying key genetic markers for improved strawberry fruit quality, and insights into powdery mildew resistance and drought tolerance in strawberries.

Learn more

### **Project Publications**

Since the start of the project in 2021, the BreedingValue consortium has published several scientific publications which are all available on our website:

See BreedingValue publications

Lately, the following **project results** became available through **peer-reviewed journal publications**:

Differential expression of CCD4(4B) drives natural variation in fruit carotenoid content in strawberry (Fragaria spp.)

 A study recently published by researchers of the BreedingValue consortium in the 'Plant Biotechnology Journal' shows how differential expression of CCD4(4B) drives natural variation in fruit carotenoid content in strawberry.

These findings provide valuable genetic insights into the natural variation of carotenoid composition and accumulation in strawberry. A high-resolution melting (HRM) DNA test developed in this study offers a rapid and reliable method for predicting high carotenoid content in strawberry fruits, representing a valuable tool for breeding projects aimed at enhancing the nutritional value of this crop.

Read more

# A major QTL region associated with powdery mildew resistance in leaves and fruits of the reconstructed garden strawberry

 Researchers of the BreedingValue partners institution LUKE recently published a study that identifies multiple QTLs for powdery mildew resistance in a pre-breeding population derived from the octoploid progenitor species of garden strawberry, including a stable major novel factor on chromosome 3B.

Read more

# Environmental sustainability and quality assessment of new raspberry genotypes cultivated in a soilless system

 Sustainable and high-quality raspberry production is a priority in Europe, but breeding programs often focus solely on yield and nutritional qualities. A study published by BreedingValue project partners addresses this gap by evaluating the environmental performance of new raspberry genotypes grown in soilless high tunnels (Italy) using Life Cycle Assessment (LCA) Environmental sustainability and quality assessment of new raspberry genotypes cultivated in a soilless system.

Read more

Open Submission to Research Topic: Genomic & Metabolomic Diversity in Fruit Plants

 We invite you to submit relevant manuscripts on the topic of how traditional and novel breeding techniques influence the genetic and metabolic diversity of fruit crops to the journal 'Frontiers in Plant Science'. The topic editors of this collection are key contributors of the BreedingValue project.

Submit your manuscript



The **BreedingValue** project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000747.

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