

# GxExM Symposium III

A symposium about modelling and prediction of crop performance using information on Genotype, Environment and Management and their interactions (GxExM), bringing together stakeholder and modelling perspectives.



Wednesday 30 and  
Thursday 31 October 2024



30/10: 9.00 am – 10.00 pm  
31/10: 9.00 am – 6.00 pm



Wageningen University,  
Netherlands and online



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Abstract deadline:  
15 September 2024

## EVENT INFORMATION

After successful symposia in Brisbane (Australia, 2022) and Gainesville (USA, 2023), we are organizing the third symposium to offer a worldwide podium for presentations and discussions around modelling and prediction of GxExM data and interactions.

The symposium will be delivered both in person and online, with an on-site participation fee of 150 euros for a maximum of 270 participants and online participation for free. The on-site fee includes dinner on Wednesday 30 October at the conference venue (Omnia building at Wageningen campus, see photo at the right).

Presentations and discussions will, upon permission, be recorded and made available end 2024 / early 2025.



The organizers strongly encourage anyone with an interest in modelling and prediction of GxE and GxExM interactions to participate and submit an abstract for a poster or oral presentation. Contributions can cover a wide spectrum of traditional quantitative genetic and physiological approaches as well as genomic and phenomic prediction methods based on penalized or Bayesian regressions, AI and hybrid methods.

**Questions:** [fred.vaneeuwijk@wur.nl](mailto:fred.vaneeuwijk@wur.nl)

**REGISTER TO ATTEND**

[bit.ly/GEM-III](https://bit.ly/GEM-III)

## GxExM BACKGROUND

The importance of GxExM interactions has been established for many agricultural systems. There are complex and growing pressures acting upon the global crop systems on which we depend for our livelihoods.

Universally, significant yield gaps have been identified between potential and realised on-farm crop productivity for most crop systems. Further, the sustainability of the current and required levels of crop productivity to meet the expectations of future needs is continually questioned.

The challenges are diverse, complex and multi-faceted. Crop breeders seek to utilise available genetic resources to develop improved cultivars. Crop agronomists seek to define agronomic management

practices that will work for the improved cultivars. Farmers seek to combine the improved cultivars with appropriate agronomic practices to achieve a target on-farm productivity while balancing short and long-term risks and rewards.

The GxExM symposia offer a platform for the initiation and continuation of integrated efforts on problems involving modelling and prediction of GxE and GxExM at multiple levels within crop systems. The organisers aim at bringing together different modelling and utilisation perspectives and facilitate interdisciplinary discussions.



**Local organisers (WU):** Fred van Eeuwijk, Jonathan Kunst, Killian Melsen, Aike Potze, Yingjie Shao, Junita Solin, Claudius van de Vijver. Admin support: Dinie Verbeek.

**International organisers:** Daniela Bustos Korts (UACH), Mark Cooper (UQ), Charlie Messina (UF). Admin support: Phoebe Baldwin (UQ).