

Special Issue

Precision Diagnosis, Simulation and Integrated Regulation of Water–Fertilizer–Salt in Horticultural Crops

Message from the Guest Editors

The rhizosphere environment—where water, fertilizer, and salt interact dynamically—plays a critical role in determining crop health, yield, and quality. Precise diagnosis of crop and soil status, coupled with advanced simulation modeling and integrated regulation strategies, offers a promising pathway to optimize resource use efficiency while minimizing environmental impacts.

This Special Issue aims to address the fundamental and applied aspects of precision water–fertilizer–salt management and rhizosphere environment regulation in horticultural systems. Topics of interest include, but are not limited to: (1) Precision diagnosis of crop water–nutrient–salt status using sensors, remote sensing, and AI-driven approaches; (2) Simulation modeling of water–fertilizer–salt dynamics in the soil–plant–atmosphere continuum; (3) Integrated regulation strategies for optimizing irrigation, fertilization, and salt leaching in horticultural production; (4) Responses of horticultural crops to deficit irrigation, saline water use, and regulated fertilizer application; (5) Energy and mass balance processes in horticultural farmland ecosystems.

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Message from the Editor-in-Chief

Horticultural plants and their products provide sustenance, health, and beauty. A confluence of factors is putting increasing pressure on horticultural production to evolve, and innovative research is addressing these challenges. *Horticulturae* provides a venue to communicate research results in a rapid manner with open access, allowing everyone the opportunity to stay abreast of leading research addressing horticulture. I invite you to consider publishing the results of your research in this high quality, peer-reviewed journal.

Editor-in-Chief

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