



## Innovative Water Management Strategies and Their Impact on Yield and Nutritional Quality of Crops

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Deadline for manuscript  
submissions:

**closed (15 January 2025)**

### Message from the Guest Editors

The exploration of low-power sensors, thermal imaging, and hyperspectral imaging has opened new avenues for understanding soil moisture dynamics, plant health, and stress responses, marking a significant shift in how we manage agricultural resources. This issue focuses on the development and application of novel sensor technologies for soil and plant water status detection, the practical benefits of precision irrigation on crop yield and quality, and importantly, the reuse of water for irrigation. It emphasizes the impact of such practices on soil and plant quality, including considerations of microplastics, thereby offering a comprehensive view on modern irrigation practices and their environmental sustainability. We invite cutting-edge research that demonstrates advancements in irrigation technology and methods, including acoustic emission sensors for drought detection, gamma radiation for soil moisture monitoring, hyperspectral imaging for monitoring crop and soil properties, and the integration of national irrigation strategies and decision support systems (DSS).





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## Message from the Editor-in-Chief

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