

Special Issue

Crop Responses and Adaptations to Environmental Stresses: New Insights and Approaches

Message from the Guest Editor

In recent decades, climate change and environmental degradation have intensified the frequency and severity of the abiotic and biotic stresses affecting crop systems worldwide. Understanding how crops respond and adapt to these environmental challenges is a central question in plant science and agricultural innovation. This Special Issue aims to highlight recent advances in our understanding of the physiological, molecular, and genetic responses of crops to various environmental stresses—including drought, salinity, heat, cold, flooding, and pest pressures. Emphasis will be placed on interdisciplinary research that links fundamental mechanisms with applied strategies to improve crop resilience and productivity.

We invite contributions that explore novel insights into plant signaling pathways, stress-responsive gene networks, microbiome interactions, phenotyping technologies, and breeding or biotechnological approaches aimed at enhancing stress tolerance. Studies that include omics tools, systems biology, modeling, or field-based validations are particularly welcome.

Guest Editor

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Message from the Editor-in-Chief

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