Special Issue

Physiological, Biochemical, and Molecular Mechanisms of Abiotic Stress Tolerance in Fruits

Message from the Guest Editors

Fruits face a range of abiotic stresses during production, postharvest handling, storage and distribution. Abiotic stress such as salinity, drought, extreme temperatures, nutrient deficiencies and exposure to heavy metals can significantly reduce both fruit productivity and quality. Enhancing the ability of fruits to tolerate these stresses is crucial for maintaining high yields in challenging conditions. In this regard, fruits have evolved various adaptive mechanisms at the physiological, biochemical and molecular levels to mitigate the impact of these stresses. A deeper understanding of how these mechanisms function and interact is essential for developing strategies to improve stress-tolerant fruit crops. Recent research advances have provided valuable insights into the complex processes that allow fruits to survive under adverse conditions. This includes the identification of stress-responsive genes, proteins and metabolites, as well as the role of signaling pathways in stress adaptation. This Special Issue will explore both fundamental and applied aspects of stress tolerance, covering topics such as physiological responses, enzymatic activity, gene expression.

Guest Editors

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Deadline for manuscript submissions

30 September 2025

Agronomy

an Open Access Journal by MDPI

Impact Factor 3.4
CiteScore 6.7

mdpi.com/si/227066

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