

Topical Collection

Abiotic Stress in Plants and Resilience: Recent Advances

Message from the Collection Editors

Plants live in ever-changing environments that are often unfavorable for growth and development. Abiotic stresses such as salinity, drought, extreme temperature, metal stress and nutrient deficiency severely inhibit plant production, hindering agricultural production and threatening food security globally. Moreover, climate change and poor management options have further worsened the situation. Plants can sense stress signals and respond quickly to these adverse conditions through regulating their molecular, physiological, metabolic and developmental responses. A large number of signaling molecules participate in these processes, exhibiting intricate interactions.

Understanding the possible mechanisms and signaling transduction underlying this process, combined with the advancement of genome-editing technologies, can help translate these findings into commercial outputs.

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