

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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About the Journal

Message from the Editor-in-Chief

Agriculture (ISSN 2077-0472) is an international, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

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