Special Issue

Cereal Crops and Climate Resilience: Harnessing Genetic Variants for Sustainable Food Security

Message from the Guest Editors

Cereal crops are the cornerstone of global food security. Climate change has increased the frequency of extreme weather events—such as heatwaves—posing significant challenges to yield stability. Developing climate-resistant cereal crops through the utilization of stress-tolerant genes or genetic variants from local germplasms represents a promising solution. Stable yield under environmental fluctuations is a key indicator of crop adaptability. While stress conditions often impose trade-offs between yield and resilience, certain genetic variants—such as gs3 in rice—demonstrate that it is possible to enhance both traits simultaneously, offering ideal targets for breeding climate-resistant crops. This Special Issue seeks to showcase research on the discovery and application of genetic variants that improve climate resilience in cereals. We welcome studies on QTL mapping, GWAS, transcriptome-based gene discovery, haplotype analysis, and gene editing for variant characterization and functional validation. Contributions on breeding strategies leveraging these variants are also encouraged, as are submissions of research articles, reviews, and commentaries.

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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.

Editor-in-Chief

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