

Special Issue

Resistance-Related Gene Mining and Genetic Improvement in Crops—2nd Edition

Message from the Guest Editors

Research on crop stress resistance is increasingly important as climate change intensifies drought, salinity, and other non-biological stressors. To improve crop adaptability and yield stability, scientists are identifying resistance-related genes and advancing genetic improvement. Molecular and genomic tools have enabled the discovery of key drought-resistance genes, which have been introduced into crops through transgenic or hybrid breeding, achieving promising results. However, challenges persist, including limited depth in gene mining, incomplete understanding of gene functions, and public concerns about transgenic crops. These factors continue to slow progress. Future work should strengthen basic research, clarify stress-resistance mechanisms, explore innovative breeding strategies, and emphasize ecological risk assessment. This Special Issue welcomes studies on novel or underexplored stress-resistance genes, as well as reviews offering new insights into crop responses to non-biological stressors.

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Deadline for manuscript submissions

25 July 2026



Agronomy

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 6.7



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