Special Issue

Application of Biotechnology in Genetic Improvement of Fruits and Vegetables

Message from the Guest Editor

With the growing global demand for sustainable and nutritious food, the application of biotechnological approaches, holds immense potential to accelerate the development of improved cultivars. These innovations enable more precise and efficient modifications in horticultural species, helping to overcome limitations of conventional breeding while ensuring food security and environmental resilience. This Special Issue aims to present novel research on the use of biotechnological tools to enhance fruit and vegetable crops. We welcome original research and review articles that explore topics including, but not limited to:

- Gene editing and CRISPR applications;
- Genomic and functional genomics studies;
- Molecular breeding and marker-assisted selection;
- Omics technologies (genomics, transcriptomics, proteomics, metabolomics);
- In vitro culture and micropropagation;
- Biofortification and nutritional improvement;
- Disease and pest resistance engineering;
- Stress tolerance enhancement.

We invite researchers worldwide to contribute their innovative findings to this Special Issue, fostering a deeper understanding and broader application of biotechnology in horticultural science.

Guest Editor

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Deadline for manuscript submissions

closed (30 April 2026)

Horticulturae

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.1

mdpi.com/si/259306

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About the Journal

Message from the Editor-in-Chief

Horticultural plants and their products provide sustenance, health, and beauty. A confluence of factors is putting increasing pressure on horticultural production to evolve, and innovative research is addressing these challenges. *Horticulturae* provides a venue to communicate research results in a rapid manner with open access, allowing everyone the opportunity to stay abreast of leading research addressing horticulture. I invite you to consider publishing the results of your research in this high quality, peer-reviewed journal.

Editor-in-Chief

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