Special Issue

Next-Generation Breeding of Fruit Trees: Integrating Genome Editing, Tissue Culture, and Genomics for Enhanced Cultivar Development

Message from the Guest Editors

Recent advances in plant biotechnology have accelerated the genetic improvement of fruit trees. Innovations in tissue culture have enabled efficient regeneration protocols. Furthermore, the advent of novel plant transformation techniques and genome-editing technologies, such as CRISPR/Cas systems, has markedly reduced the time required to develop new genotypes compared to conventional crossbreeding methods. These biotechnological tools facilitate precise genetic modifications.

This Special Issue aims to showcase cutting-edge research in the genetic improvement of fruit trees, with a particular focus on the following topics:

Genome editing and transformation technologies for trait enhancement.

Advancements in tissue culture and regeneration protocols for difficult-to-transform species.

Genomic selection and marker-assisted breeding strategies.

Integration of biotechnological and conventional breeding approaches to accelerate cultivar development.

We invite original research articles, reviews, and case studies that highlight recent progress and prospects in the application of breeding, gene editing, and biotechnology for the improvement of fruit tree species.

Guest Editors

Dr. Ivano Forgione
Dr. Muhammad Ajmal Bashir
Dr. Antonino Pisciotta

Deadline for manuscript submissions

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Horticulturae
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
horticulturae@mdpi.com

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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

Prof. Dr. Luigi De Bellis
Department of Biological and Environmental Sciences and Technologies (DiSTeBA), Salento University, 73100 Lecce, Italy

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