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Genetics and Molecular Breeding of Fruit Tree Species

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Message from the Guest Editors

Genetic studies and the conventional breeding of fruit trees are hampered by several disadvantages such as the long juvenile period, the large plant size, and high heterozygosity. Advances in biotechnology and the advent of genomics have opened new opportunities to overcome the limits of conventional breeding in fruit tree breeding.

The availability of high-throughput genetic platforms, the release of whole genome sequence resources, omics (e.g., transcriptomics, proteomics, metabolomics, hormonomics), and genome-wide association studies have demonstrated a tremendous leap forward in the understanding of the genetic basis underlying traits of agronomical interest.

Furthermore, ongoing advances in biotechnology strategies such as the use of molecular markers and marker-assisted selection or the advent of new plant breeding techniques (e.g., cisgenesis and genome editing) greatly accelerated progress in functional trait characterization and the breeding process in fruit trees.

This Special Issue of *Horticulturae* aims to cover the recent findings related to the genetics and molecular breeding of fruit trees for the definition of novel cultivars with superior characteristics.

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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.

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