Special Issue

Novel Breeding Techniques to Improve Disease Resistance in Horticultural Crops

Message from the Guest Editors

Addressing plant diseases is crucial for sustaining global food production and ensuring food security for a growing population. Novel breeding techniques (NBTs) offer innovative ways to improve disease resistance in horticultural crops. Some of the key NBTs include genome editing, RNA interference (RNAi), marker-assisted Selection (MAS), transgenic approaches, genome-wide association studies (GWAS), mutagenesis techniques, synthetic biology, bioinformatics, and computational approaches to predict candidate genes associated with disease resistance. Furthermore, epigenetic engineering at the target sites involved in the disease resistance mechanism could be an emerging approach for crop improvement. By combining these novel breeding techniques, researchers and breeders can develop horticultural crops with enhanced disease resistance, leading to improved crop yields, reduced dependence on chemical pesticides, and more sustainable agricultural practices. This Special Issue focuses on recent advances in NBTs to improve disease resistance in horticultural crops, inviting all types of articles, such as research papers and methods, reviews, and opinions.

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