Special Issue

Crop Genetic Mechanisms and Breeding Improvement

Message from the Guest Editors

The exploration of crop genetics and breeding holds the potential to revolutionize agricultural practices by creating improved crop varieties that exhibit higher yields, better nutritional profiles, and enhanced tolerance to environmental challenges. Identifying specific genetic determinants of stress adaptation and precisely introducing them into elite varieties is an effective new paradigm. The combination of contemporary genomics and genetic techniques, along with advancements in accurate phenotyping and breeding methods, is anticipated to enhance the understanding of the genes and metabolic pathways responsible for conferring abiotic stress resistance in crops. This special issue gathers cutting-edge research on deciphering the intricate genetic pathways and mechanisms underlying crop traits, which are crucial for sustainable food production in the face of global challenges such as climate change and growing populations. Contributions to this issue shed light on the interplay between crop genomes, diverse omics technologies, and advanced breeding methodologies to develop crops that thrive in changing environmental conditions.

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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