

Special Issue

Targeted Rice Improvement through Genome Editing

Message from the Guest Editors

Rice is one of the most important food crop and is consumed by almost half of the world's population, meaning that more rice needs to be produced to meet demand. Recently, CRISPR–Cas-based gene editing has been developed as a powerful tool and has been used to improve several rice characteristics, including yield, quality, biotic stress resistance, and abiotic stress tolerance. Gene editing strategies have also rapidly revolutionized in the past ten years due to the targeted knockout of a single or multiple genes by the CRISPR–Cas system, resulting in precise gene editing with base editing or prime editing technology. Interestingly, numerous plant varieties created by gene editing technologies are available for commercial cultivation in some developed countries, implying genome editing systems could be implemented for rice varieties. This Special Issue, “Targeted Rice Improvement through Genome Editing”, encourages the submission of original and/or review articles related to the application of genome editing techniques in rice. Possible targeted traits include grain yield, grain quality and nutrition, and biotic and abiotic stress tolerance.

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