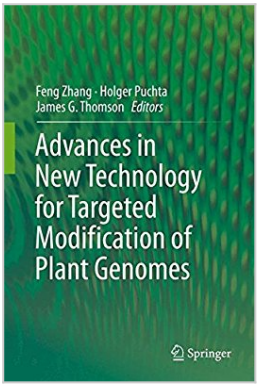

Advances in New Technology for Targeted Modification of Plant Genomes

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Over the past 50 years, biotechnology has been the major driving force for increasing crop productivity. Particularly, advances in plant genetic engineering technologies have opened up vast new opportunities for plant researchers and breeders to create new crop varieties with desirable traits. Recent development of precise genome modification methods, such as targeted gene knock-out/knock-in and precise gene replacement, moves genetic engineering to another level and offers even more potentials for improving crop production. The work provides an overview of the latest advances on precise genomic engineering technologies in plants. Topics include recombinase and engineered nucleases-mediated targeted modification, negative/positive selection-based homologous recombination and oligo nucleotide-mediated recombination. Finally, challenges and impacts of the new technologies on present regulations for genetic modification organisms (GMOs) will be discussed.

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Editorial Review

From the Back Cover
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