1. Record Nr. UNINA9910298280903321

Titolo	Advances in New Technology for Targeted Modification of Plant Genomes / / edited by Feng Zhang, Holger Puchta, James G. Thomson
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2015
ISBN	1-4939-2556-3
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (171 p.)
Disciplina	570 571.32 581.35 631.52 660.6
Soggetti	Plant breeding Plant genetics Plant anatomy Plant development Plant Breeding/Biotechnology Plant Genetics and Genomics Plant Anatomy/Development
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Double-strand break repair and its application to genome engineering in plants -- Engineering meganuclease for precise plant genome modification -- High efficient genome modification by designed Zinc Finger Nuclease -- Engineered TAL effector proteins: versatile reagents for manipulating plant genomes -- Oligo-mediated targeted gene editing -- Gene targeting in crop species with effective selection systems -- Recombinase Technology for Precise Genome Engineering -- PBRM1: Developing CRISPR technology in major crop plants.
Sommario/riassunto	This work provides an overview of the latest advances on precise genomic engineering technologies in plants. The research provided covers a wide range of topics, including recombinase and engineered nucleases-mediated targeted modification, negative/positive selection-

based homologous recombination, and oligo nucleotide-mediated recombination. The text also discusses challenges and impacts of new technologies on present regulations for genetically modified organisms (GMOs).