1. Record Nr. UNINA9910337941803321

Titolo	The Capsicum Genome / / edited by Nirala Ramchiary, Chittaranjan Kole
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-319-97217-0
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XX, 232 p.)
Collana	Compendium of Plant Genomes, , 2199-4781
Disciplina	581.35
Soggetti	Plant genetics Plant breeding Agriculture Plant Genetics and Genomics Plant Breeding/Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Genetic resources in Capsicums -- Classical genetics and traditional breeding -- Cytology and DNA content variation of Capsicum genomes -- Development and evolution of molecular markers and genetic maps in Capsicum species -- Molecular mapping and identification of QTLs/ genes for economically important traits in Capsicum genome -- Genome sequencing of Capsicum species -- Sequencing of organelle genomes in Capsicum -- Landscape of noncoding RNA genes in capsicum genome -- Epigenome landscape in Capsicum genome -- Revisiting Origin, Evolution and Phylogenetics of Capsicums in the Genomics era -- Capsicum genome sequence databases -- Impact of genomics on germplasm characterization & gene discovery in Capsicums.
Sommario/riassunto	This book contains complete information on Capsicum genetic resources, diversity, evolution, history and advances in capsicum improvement from classical breeding to whole genome sequencing, genomics, databases and its impact on next generation pepper breeding. Capsicum is one of the most important Solanaceae crops grown worldwide as vegetables and spices. Due to its high economic

value and to meet the demands of enormous population growth amid biotic and abiotic stresses, there has been an ongoing breeding program utilizing available genetic resources with desired traits to increase the sustainable productivity of this crop for several decades. However, the precision breeding of this crop for desired traits only started with the advent of molecular markers. The recent advances in high-throughput genome sequencing technologies helped in the quick decoding of transcriptome, epigenome, nuclear and organeller genomes, thereby enhancing our understanding of the structure and function of the Capsicum genome, and helping in genomics assisted breeding. These advanced technologies coupled with conventional mapping have greatly contributed towards dissection and manipulation of economically important traits more precisely and made less time consuming.