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Titolo	The Sorghum Genome // edited by Sujay Rakshit, Yi-Hong Wang
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Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (289 pages) : illustrations
Collana	Compendium of Plant Genomes, , 2199-4781
Disciplina	570
Soggetti	Plant breeding Plant genetics Agriculture Plant Breeding/Biotechnology Plant Genetics and Genomics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Economic/Academic importance - Gebisa Ejeta -- The botany and taxonomy of Sorghum - A Ashok Kumar (Alternative: Dr Sally Norton) -- Cytological details of genome - S Rakshit -- Molecular mapping of genes & QTLs - WL Rooney (Alternative: Alex Feltus; Clemson) -- Positional cloning of important stress adaptation genes - J Magalhaes -- Structural & functional genomic resources developed - S Deshpande (Alternative: Ming Li Wang) -- Progress on whole-genome sequencing - Bradley C Campbell -- Background history of the national and international genome initiatives, public and private partners involved - A Paterson (Tentative only) -- Software for genome assembly and annotation - Shuaishuai Tai -- Population genomics tools - Celine Frere -- Synteny with allied & model genomes - P Rajendrakumar -- Genomics approaches to abiotic stress resistance - Marc Knight -- Genomics approaches to biotic stress resistance - Emma Mace (Alternative: Guoqing Liu) -- Genomics approaches to improved quality - Ian Godwin -- Community resources for molecular breeding - Tushar Shah -- Impact on germplasm characterization & gene discovery - John E. Erpelding -- Impact on plant breeding - Gary Peterson -- Future prospects - Ian D Godwin and S Rakshit.

This book provides insights into the current state of sorghum genomics. It particularly focuses on the tools and strategies employed in genome sequencing and analysis, public and private genomic resources and how all this information is leading to direct outcomes for plant breeders. The advent of affordable whole genome sequencing in combination with existing cereal functional genomics data has enabled the leveraging of the significant novel diversity available in sorghum, the genome of which was fully sequenced in 2009, providing an unmatched resource for the genetic improvement of sorghum and other grass species. Cultivated grain sorghum is a food and feed cereal crop adapted to hot and dry climates, and is a staple for 500 million of the world's poorest people. Globally, sorghum is also an important source of animal feed and forage, an emerging biofuel crop and model for C4 grasses, particularly genetically complex sugarcane.
