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Titolo	The Wild Oryza Genomes / / edited by Tapan K. Mondal, Robert J. Henry
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-71997-1
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (310 pages) : illustrations (some color), maps, tables
Collana	Compendium of Plant Genomes, , 2199-4781
Disciplina	570
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 bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Wild relatives of rice: A valuable genetic resource for genomics and breeding research -- Informatics of wild relatives of rice -- Evolutionary relationships among the Oryza species -- Oryza alta Swollen -- Oryza australiensis Domin -- Oryza barthii A. Chev.- Oryza brachyantha A. Chev. et Roehr -- Oryza coarctata Tateoka -- Oryza glaberrima Steud -- Oryza glumaepatula Steud -- Oryza grandiglumis (Doell) Prod -- Oryza granulata Nees et Arn. ex Watt -- Oryza latifolia Desv -- Oryza longiglumis Jansen -- Oryza longistaminata A. Chev. and Röhr -- Oryza meridionalis N.Q.Ng -- Oryza meyeriana Baill -- Oryza minuta J. Presl. ex C. B. Persl.- Oryza neocaledonica Morat -- Oryza nivara Sharma et Shastry -- Oryza officinalis complex -- Oryza perennis -- Oryza rhizomatis Vaughan -- Oryza ridleyi Hook. F -- Oryza rufipogon Griff -- An account of unclassified species (Oryza schlechteri), sub-species (Oryza indandamanica Ellis, Oryza sativa f. spontanea Baker) and ortho-group species (Leersia perrieri) of Oryza.
Sommario/riassunto	This book focuses on the latest genome sequencing of the 25 wild Oryza species, public and private genomic resources, and their impact on genetic improvement research. It also addresses the

untapped reservoir of agronomically important traits in wild Oryza species. Rice is a model crop plant that is frequently used to address several basic questions in plant biology, yet its wild relatives offer an untapped source of agronomically important alleles that are absent in the rice gene pool. The genus Oryza is extremely diverse, as indicated by a wide range of chromosome numbers, different ploidy levels and genome sizes. After a 13-year gap from the first sequencing of rice in the 2002, the genomes of 11 wild Oryzaspecies have now been sequenced and more will follow. These vast genomic resources are extremely useful for addressing several basic questions on the origin of the genus, evolutionary relationships between the species, domestication, and environmental adaptation, and also help to substantiate molecular breeding and pre-breeding work to introgress useful characters horizontally from wild species into cultivated rice.