Record Nr. UNINA9910373914103321 Autore Saharan Govind Singh **Titolo** Powdery Mildew Disease of Crucifers: Biology, Ecology and Disease Management // by Govind Singh Saharan, Naresh K. Mehta, Prabhu Dayal Meena Singapore:,: Springer Singapore:,: Imprint: Springer,, 2019 Pubbl/distr/stampa **ISBN** 981-13-9853-4 Edizione [1st ed. 2019.] 1 online resource (LXIII, 362 p. 104 illus.) Descrizione fisica Disciplina 571.92 Soggetti Plant diseases Agriculture Plant anatomy Plants - Development Plant physiology Microbiology Plant Pathology Plant Anatomy/Development Plant Physiology Crucíferes Patologia vegetal Micosi vegetal Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia 1) Powdery Mildew Perspective -- 2) The Disease- Powdery mildew --Nota di contenuto 3) The Pathogen -- 4) Infection, Pathogenesis, and Disease cycle -- 5) Fine Structures, and Electron Microscopy -- 6) Epidemiology, and Forecasting -- 7) Host Resistance -- 8) Disease Management -- 9) Techniques -- 10) Powdery mildew epilogue -- 11) Future research priorities of crucifer's powdery mildew -- 12) Subject Index. Powdery mildew disease is the fourth most widespread disease in Sommario/riassunto cruciferous crops and a devastating effect, causing significant losses in terms of quality and quantity in rapeseed and mustard. Powdery

mildews are also a favourable host-pathosystem model for basic research on host-parasite interactions, developmental morphology, cytology, and molecular biology to identify the effector proteins/genes governing different biological functions. This book provides a comprehensive overview of all the published information in the field for researchers, teachers, students, extension experts, industrialists and farmers, and includes illustrations, photographs, graphs, figures, tables, histograms, micrographs, electron micrographs, and flow charts to aid understanding. It also describes standardized reducible techniques. The book discusses each disease in detail, describing the distribution, symptomatology, host range, yield losses and disease assessment, as well as the taxonomy, morphology, phylogeny, variability, sporulation, survival and perpetuation of the pathogen. Further, it explores topics such as spore germination; infection; pathogenesis; disease cycle; epidemiology; forecasting; fine structures; host resistance; biochemical, histological, genetic and molecular aspects such as cloning and mapping of R genes; sources of resistance; disease resistance breeding; and the genetics of host-parasite interactions and disease management.