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Descrizione fisica	1 online resource (366 pages)
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Soggetti	Agricultural genome mapping Agricultural biotechnology Agriculture - Economic aspects Bioclimatology Plant biotechnology Plant physiology Agricultural Genetics Agricultural Biotechnology Agricultural Economics Climate Change Ecology Plant Biotechnology Plant Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Botany -- Ecological and Ecophysiological Aspects -- Brassica's - Mycorrhizal Interactions and Development Related to Other Organisms -- Molecular Aspects of Brassica -- Propagation and Production of Brassica -- Phytochemical Constituents, Pharmacological Activities and Human Health -- Economic Importance -- Global Perspective and Future Approaches.
Sommario/riassunto	Plant Biology is reaching an extraordinary degree of complexity, especially due to late technological advances. Integration from the molecular to the whole plant level of the mechanisms governing growth and developmental processes provides a better and an increasingly diverse vision of the functioning of plants in different habitats and

under changing environmental conditions. This covers various levels of plant research: cellular, biochemical, molecular, physiological, ecological and evolutionary, allowing us to more precisely understand the physiological/molecular mechanisms, to see the richness of phenotypic responses of plants to the diverse environments, search the molecular basis of variation, consider the diversity and specificities of plant functionalism, progress made in the fundamental knowledge of reception of external signals and internal signaling pathways, the integration of metabolic functions, and the differentiation and development of plants exposed to stress. Brassicaceae is a large plant family with 338 genera, approximately globally distributed 4000 species, with major agro-economic and scientific importance. Several members are metal hyperaccumulators among 0.2 percent of all angiosperms, playing a role in phytoremediation technology. The oilseed Brassicas grow fast, yield high biomass and are well adapted with a potential for selecting superior genotypes for different purposes; well suited to genetic manipulation, in vitro culture techniques and attractive candidates for the introduction of genes. The genus "Brassica" include oilseeds and vegetables of global economic importance. This book reviews advances in various areas of "Brassicas", covering the botanical aspects as well as use of rapid-cycle Brassicas, their ecophysiology, tissue culture and gene transfer, molecular genetics, biotic and abiotic stress resilience, and molecular/speed breeding farming. It targets a potentially broad spectrum of audience ranging from the researchers in this field to undergraduate and graduate students who want an overview of current knowledge referred to the Brassica's as food.

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