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Titolo	Reactive Oxygen Species [[electronic resource]] : Prospects in Plant Metabolism // edited by Mohammad Faizan, Shamsul Hayat, S. Maqbool Ahmed
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ISBN	981-19-9794-2
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (299 pages)
Disciplina	546.72159
Soggetti	Stress (Physiology) Plants Plant physiology Botanical chemistry Metabolism, Secondary Plant Stress Responses Plant Physiology Plant Biochemistry Plant Secondary Metabolism
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1:An Update on Reactive Oxygen Species Synthesis and its Potential Application -- Chapter 2 :Mechanism of Reactive Oxygen Species Regulation in Plants -- Chapter 3: Biomolecules Targeted by Reactive Oxygen Species -- Chapter 4: Functions of Reactive Oxygen Species in Improving Agriculture and Future Crop Safety -- Chapter 5: The Ecology of Reactive Oxygen Species Signaling -- Chapter 6: Physiological Impact of Reactive Oxygen Species on Leaf -- Chapter 7: Reactive Oxygen Species: Role in Senescence and Signal Transduction -- Chapter 8: Hazardous Phytotoxic Nature of Reactive Oxygen Species in Agriculture -- Chapter 9: Hormonal Response in Plants Influenced by Reactive Oxygen Species -- Chapter 10: The Dual Role of Reactive Oxygen Species as Signals that Influence Plant Stress Tolerance and Programmed Cell Death -- Chapter 11: ight into the Interaction of Strigolactones, Abscisic Acid, and Reactive Oxygen Species Signals --

Chapter 12: 12. Hydrogen Peroxide: Regulator of Plant Development and Abiotic Stress Response -- Chapter 13: Towards Sustainable Agriculture: Strategies Involving Phyto-Protectants against Reactive Oxygen Species -- chapter 14: Signaling Pathway of Reactive Oxygen Species in Crop Plants under Abiotic Stress -- Chapter 15: Adverse Impact of ROS on Nutrient Accumulation and Distribution in Plants.

Sommario/riassunto

This edited book focuses on ROS synthesis, potential applications, toxicity, and preservations. It explores the recently proposed hormonal response and biomolecules targeted in regulation of ROS. Chapters cover resistance and susceptibility to plant pathogen, strategies involving phytoprotectants, and life span of nematode affected by ROS. This book includes a compilation of recently written, integrated, and illustrated reviews describing latest information on ROS. Chapters incorporate both theoretical and practical aspects of plant ROS. Reactive oxygen species (ROS) are key signaling molecules involved in the redox equilibrium and biological processes. In plants, ROS play an important role in biotic and abiotic stress sensing, integration of diverse environmental signals, and commencement of stress-response networks, thus contributing to the establishment of defense mechanisms and plant resilience. Critical amount of ROS is required by plants for regular operation of vital physiological mechanisms. This book brings together a compilation of latest research work on reactive oxygen species and their emerging importance. The book is a useful read for students, researchers, and scientists in the field of agri-life sciences.
