

1. Record Nr.	UNINA9910688353003321
Titolo	Advances in Plant Defense Mechanisms // edited by Josphert Ngui Kimatu
Pubbl/distr/stampa	London : , : IntechOpen, , 2022 ©2022
Descrizione fisica	1 online resource (370 pages)
Disciplina	571.9453
Soggetti	Plant defenses
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Impact of Abiotic Stress on Phytoplankton and Zooplankton with Special Reference to Food Web By Golden Gokhale and Guru Dutt Sharma -- 2. Effects of High Temperature on Crops By Theivasigamani Parthasarathi, Saiyyeda Firdous, Einstein Mariya David, Kuppan Lesharadevi and Maduraimuthu Djanaguiraman -- 3. Drought Stress in Millets and Its Response Mechanism By Anjali Tiwari, Kapil Kesarwani, Arushi Sharma, Tapan Ghosh, Nisha Bisht and Shailja Punetha -- 4. Abiotic Stresses and Their Management in Vegetable Crop Production By Khursheed Hussain, Sameena Lone, Faheema Mushtaq, Ajaz Malik, Sumati Narayan, Majid Rashid and Gazala Nazir -- 5. Copper Toxicity in Plants: Nutritional, Physiological, and Biochemical Aspects By Flavio Jose Rodrigues Cruz, Raphael Leone da Cruz Ferreira, Susana Silva Conceicao, Edson Ugulino Lima, Candido Ferreira de Oliveira Neto, Jessivaldo Rodrigues Galvao, Sebastiao da Cunha Lopes and Ismael de Jesus Matos Viegas -- 6. Metal Nanoparticles and Abiotic Stress Tolerance By Maryam Dahajipour Heidarabadi -- 7. Heat Shock Proteins (HSP70) Gene: Plant Transcriptomic Oven in the Hot Desert By Fatima Batool, Batcho Anicet Agossa, Zainab Y. Sandhu, Muhammad Bilal Sarwar, Sameera Hassan and Bushra Rashid -- 8. Abiotic Stress in Plants By Shubham Dey and Ayan Raichaudhuri -- 9. Heterologous Expression of Genes in Plants for Abiotic Stresses By Shahzad Ali, Nadir Zaman, Waqar Ali, Majid Khan, Muhammad Aasim, Asmat Ali and Muhammad Usman -- 10. Reactive Oxygen Species, Oxidative Damage

and Their Production, Detection in Common Bean (*Phaseolus vulgaris* L.) under Water Stress Conditions By Asmat Ara, Mahroofa Jan, Parvaze A. Sofi, Munezeh Rashid, Ajaz Ahmad Lone, Zahoor Ahmad Dar, Mohd. Ashraf Rather and Musharib Gull -- 11. Physiological Mechanisms of Tolerance to Drought and Heat in Major Pulses for Improving Yield under Stress Environments By Partha S. Basu, Sushil Kumar Chaturvedi, Pooran Mall Gaur, Biswajit Mondal, Surendra Kumar Meena, Krishnashis Das, Vaibhav Kumar, Kalpana Tewari and Kusum Sharma -- 12. Role of Microorganisms in Alleviating the Abiotic Stress Conditions Affecting Plant Growth By Talaat El Sebai and Maha Abdallah -- 13. Techniques against Distinct Abiotic Stress of Rice By Ananya Prova and Md. Saeed Sultan -- 14. Interactive Effects of Salinity, Drought, and Heat Stresses on Physiological Process and Selection Criteria for Breeding Stress-Resistant Cotton By Volkan Mehmet Cinar, Serife Balci and Aydn Unay -- 15. Influence of Soil Moisture Stress on Vegetative Growth and Root Yield of Some Cassava Genotypes for Better Selection Strategy in Screen House Conditions and Different Agro-Ecologies in Nigeria By Najimu Adetoro and Sikirou Mouritala -- 16. Tolerance of Plant Cell Wall to Environment By Olena Nedukha -- 17. Climate Change and Abiotic Stresses in Plants By Ananya Baidya, Mohammed Anwar Ali and Kousik Atta.

---

### Sommario/riassunto

Increasing human migrations, technological advances, agricultural activities, and climate change are forcing plants to adapt to new environments. This book highlights current morphological, anatomical, physiological, molecular, and genomic advances in plant defense mechanisms. These advances, including epigenetic mechanisms, have been linked to observed phenotypic plant plasticity. The book also outlines next-generation food systems, considering the resilience and sustainability of plant genomes and epigenomes.

---