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	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

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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.