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Sommario/riassunto	The survival of plants under stressful environments requires the study of the mechanisms that help in reversing the adverse impacts of reactive oxygen species (ROS) excessively generated under these conditions. Understanding the mechanisms helps in adopting strategies to induce such mechanisms for the better acclimation of plants. These ROS, if not scavenged, cause damage of cellular components, including lipids, proteins, nucleic acids, and metabolites, and, in extreme cases, even the death of cells in plants. Confronted with abiotic stress, there is an initial elevation in ROS that activates redox signaling to initiate defense in plants through the activation of antioxidant activity. The improvement in the capacity of antioxidant machinery is one of the essential strategies with which to develop tolerance and relieve the pressure of abiotic-stress-induced oxidative changes for the survival of plants. This book provides knowledge on the following aspects: Impact of abiotic stress factors and the response of antioxidant machinery to changing abiotic stress conditions, as well as strategies with which to strengthen antioxidant machinery for the survival of plants; Strategies to improve the tolerance mechanisms of plants against abiotic stress factors; Roles and the mechanisms of the plant signaling molecules/growth modifiers/mineral nutrients/hormones/other elicitors in relieving the impacts of abiotic stresses; The utilization of

approaches such as genomics, metabolomics, transcriptomics, proteomics, ionomics, and nutiomics to strengthen antioxidant machinery and make plant life easier under abiotic stress conditions.