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Titolo	Salt and Drought Stress Tolerance in Plants : Signaling Networks and Adaptive Mechanisms // edited by Mirza Hasanuzzaman, Mohsin Tanveer
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Descrizione fisica	1 online resource (X, 403 p. 27 illus., 25 illus. in color.)
Collana	Signaling and Communication in Plants, , 1867-9056
Disciplina	581.13354
Soggetti	Plant physiology Botanical chemistry Agriculture Plant ecology Plant biotechnology Plant Physiology Plant Biochemistry Plant Ecology Plant Biotechnology Agricoltura Sequeres Sòls salins Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	An overview of salinity tolerance mechanism in plants -- Plant responses and tolerance to combined salt and drought stress -- Special adaptive features of plant species in response to salinity -- Special adaptive features of plant species in response to drought -- Special anatomical features of halophytes: Implication for salt Tolerance -- Plant roots- the hidden half for investigating salt and drought stress responses and tolerance -- Plant responses and tolerance to extreme salinity: Learning from halophytes tolerance to extreme salinity --

Programmed cell death and drought stress signaling -- Overview of signal transduction in plants under salt and drought stresses -- Calcium signaling in plants under drought -- ROS signalling in modulating salinity stress tolerance in plants -- Phytohormone signaling in response to drought -- Physiological Role of Gamma-Aminobutyric Acid in Salt Stress Tolerance -- NAC transcription factors in drought and salinity tolerance -- Genetic manipulation of drought stress signaling pathways in plants -- QTL mapping for drought stress tolerance in plants.

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Sommario/riassunto

This book presents various aspects of salt and drought stress signaling in crops, combining physiological, biochemical, and molecular studies. Salt and drought stress are two major constraints on crop production worldwide. Plants possess several mechanisms to cope with the adverse effects of salt and drought. Among these mechanisms, stress signaling is very important, because it integrates and regulates nuclear gene expression and other cellular activities, which can help to restore cellular homeostasis. Accordingly, understanding the signaling cascades will help plant biologists to grasp the tolerance mechanisms that allow breeders to develop tolerant crop varieties. This book is an essential resource for researchers and graduate students working on salt and drought stress physiology and plant breeding. .

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