

Contents

1 The Research, Development, Commercialization, and Adoption of Drought and Stress-Tolerant Crops	1
Gregory Graff, Gal Hochman and David Zilberman	
2 Impact of Extreme Events on Salt-Tolerant Forest Species of Andaman and Nicobar Islands (India)	35
Alok Saxena, P. Ragavan and Mani Saxena	
3 Greenhouse Gases Emission from Rice Paddy Ecosystem and their Management.....	65
T. B. Dakua, L. Rangan and Sudip Mitra	
4 Remote Sensing Applications to Infer Yield of Tea in a Part of Sri Lanka.....	91
Saumitra Mukherjee, Jayasekara Balasuriya, Don Aruna, Pradeep Kumara and Chander Kumar Singh	
5 Polyamines Contribution to the Improvement of Crop Plants Tolerance to Abiotic Stress	113
Ana Bernardina Menéndez, Andrés Alberto Rodriguez, Santiago Javier Maiale, Kessler Margarita Rodriguez, Bremont Juan Francisco Jimenez and Oscar Adolfo Ruiz	
6 Overlapping Horizons of Salicylic Acid under Different Stresses	137
Mohd Irfan, Shamsul Hayat, Arif Shafi Wani and Aqil Ahmad	
7 Genotoxic Stress, DNA Repair, and Crop Productivity	153
Alma Balestrazzi, Massimo Confalonieri, Anca Macovei, Mattia Donà and Daniela Carbonera	

8 In Vitro Haploid Production—A Fast and Reliable Approach for Crop Improvement	171
Rashmi Rekha Hazarika, Vijay Kumar Mishra and Rakhi Chaturvedi	
9 Production of Abiotic Stress Tolerant Fertile Transgenic Plants using Androgenesis and Genetic Transformation Methods in Cereal Crops.....	213
S. M. Shahinul Islam and Narendra Tuteja	
10 Plant Diseases—Control and Remedy Through Nanotechnology	231
Remya Nair and D. Sakthi Kumar	
11 Nanobiotechnology: Scope and Potential for Crop Improvement.....	245
Faheem Ahmed, Nishat Arshi, Shalendra Kumar, Sarvajeet Singh Gill, Ritu Gill, Narendra Tuteja and Bon Heun Koo	
12 Role of Nematode-Trapping Fungi for Crop Improvement under Adverse Conditions.....	271
Rakesh Kumar Singh, Dipesh Kumar Trivedi and Amit Srivastava	
13 Sugars as Antioxidants in Plants	285
Darin Peshev and Wim Van den Ende	
14 Chromium Toxicity and Tolerance in Crop Plants	309
Ishrat Khan, Hema Diwan and Altaf Ahmad	
15 Boron Toxicity and Tolerance in Crop Plants	333
Robert J. Reid	
16 Arsenic Toxicity in Crop Plants: Approaches for Stress Resistance.....	347
Dhammaprakash Pandahri Wankhede, Meetu Gupta and Alok Krishna Sinha	
17 Mechanism of Cadmium Toxicity and Tolerance in Crop Plants.....	361
Sarvajeet Singh Gill, Naser Aziz Anjum, Ritu Gill, Mirza Hasanuzzaman, Pankaj Sharma and Narendra Tuteja	
Index.....	387

Crop Improvement Under Adverse Conditions

Tuteja, N.; Gill, S.S. (Eds.)

2013, XXII, 394 p., Hardcover

ISBN: 978-1-4614-4632-3