1. Record Nr. UNINA9910298279203321

Titolo	Abiotic Stress Biology in Horticultural Plants / / edited by Yoshinori Kanayama, Alexey Kochetov
Pubbl/distr/stampa	Tokyo : , : Springer Japan : , : Imprint : Springer, , 2015
ISBN	4-431-55251-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (219 p.)
Disciplina	551.6 570 571.2 630 641.3 660.65 664
Soggetti	Plant physiology Agriculture Climatic changes Food—Biotechnology Genetic engineering Plant Physiology Climate Change/Climate Change Impacts Food Science Genetic Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	PART I STRESS PHYSIOLOGY AND MOLECULAR BIOLOGY IN HORTICULTURAL PLANTS -- 1 Effect of Salt Stress on the Growth and Fruit Quality of Tomato Plants -- 2 Ethylene, Oxygen, Carbon Dioxide, and Temperature in Postharvest Physiology -- 3 Role of Polyamines in Stress Response in Horticultural Crops -- 4 Effect of Temperature on Fruit Color Development -- 5 Polyol Metabolism and Stress Tolerance in Horticultural Plants -- PART II EFFECTS OF ABIOTIC STRESS ON HORTICULTURAL CROP PRODUCTION AND STORAGE -- 6 Influence of

Drought and High Temperature on Citrus -- 7 Fruit Set and Temperature Stress -- 8 Postharvest Chlorophyll Degradation and Oxidative Stress -- PART III STRESS BIOLOGY IN PHYSIOLOGICAL DISORDERS OF HORTICULTURAL CROPS -- 9 Blossom-End Rot in Fruit Vegetables -- 10 Watercore in Fruits -- 11 Water Uptake Through the Surface of Fleshy Soft Fruit: Barriers, Mechanism, Factors, and Potential Role in Cracking -- PART IV GENETIC ENGINEERING TECHNOLOGIES AND OMICS IN STRESS TOLERANCE -- 12 Promoters for Transgenic Horticultural Plants -- 13 mRNA Translational Enhancers as a Tool for Plant Gene Engineering -- 14 RNA-Seq Data Analysis for Studying Abiotic Stress in Horticultural Plants.

Sommario/riassunto

The purpose of this publication is to elucidate the biological aspect of the abiotic stress response from the field to the molecular level in horticultural plants. This book is unique in that it concerns the basic aspect of abiotic stress biology and research progress at the molecular level in model plants or major field crops, as it focuses mainly on the abiotic stress response in existing horticultural plants. Many readers interested in plant abiotic stress biology are aware of the application of the latest findings to agricultural production, and this book will have a special appeal for those readers. The book will be of interest to scientists and graduate students who are involved in the research, development, production, processing, and marketing of horticultural products, including those in developing countries who are interested in high tech and advanced science in this field. The application of the latest findings to agricultural production is particularly useful. Stress tolerance mechanisms in horticultural crops are gaining importance, because most agricultural regions are predicted to experience considerably more extreme environmental fluctuations due to global climate change. Further, because of recent progress in next-generation sequencing technologies, the postgenomic era is impending not only in model plants and major cereal crops but also in horticultural crops, which comprise a great diversity of species. This book provides information on the physiological aspects of the abiotic stress response in horticultural plants, which is considered essential for postgenomic research.