



Book | © 2019

Plant Biotechnology: Progress in Genomic Era

[Home](#) > [Book](#)**Editors:** [S. M. Paul Khurana](#), [Rajarshi Kumar Gaur](#)


Combines the topics of physiology, stress, genes regulation and transgenics approaches to scoop up crop productivity and management

Includes deep transcriptome analysis and multiplexing, while reducing time, cost, and effort for the analysis of gene are pooled and sequenced

Serves as a complete package for advanced undergraduate students, researchers and scientists with an interest in Plant Molecular Biology

22k [Accesses](#) | 47 [Citations](#)

Sections

[Table of contents](#)[About this book](#)[Keywords](#)[Editors and Affiliations](#)[About the editors](#)[Bibliographic Information](#)Access via your institution eBook EUR 213.99

Price includes VAT (India)

- ISBN: 978-981-13-8499-8
- Instant EPUB and PDF download
- Readable on all devices
- Own it forever
- Exclusive offer for individuals only
- Tax calculation will be finalised during checkout

[Buy eBook](#)[Softcover Book](#) EUR 249.99[Hardcover Book](#) EUR 249.99[Learn about institutional subscriptions](#)

130 national/international papers and presented near about 50 papers in the national and international conferences. He was awarded as Fellow of Linnean Society, London. Currently, he is handling many national & international grants and international collaborative projects on plant viruses and disease management.

[Back to top](#) 

Bibliographic Information

Book Title Plant Biotechnology: Progress in Genomic Era	Editors S. M. Paul Khurana, Rajarshi Kumar Gaur	DOI https://doi.org/10.1007/978-981-13-8499-8
Publisher Springer Singapore	eBook Packages Biomedical and Life Sciences Biomedical and Life Sciences (R)	Copyright Information Springer Nature Singapore Pte Ltd. 2019
Hardcover ISBN 978-981-13-8498-1 Published: 27 November 2019	Softcover ISBN 978-981-13-8501-8 Published: 27 November 2020	eBook ISBN 978-981-13-8499-8 Published: 14 November 2019
Edition Number 1	Number of Pages XX, 670	Number of Illustrations 6 b/w illustrations, 75 illustrations in colour

Topics
[Plant Biotechnology](#), [Plant Genetics](#), [Plant Biochemistry](#),
[Plant Physiology](#), [Microbiology](#)

[Back to top](#) 



Plant Biotechnology: Progress in Genomic Era pp 131–146 | [Cite as](#)

[Home](#) > [Plant Biotechnology: Progress in Genomic Era](#) > [Chapter](#)

Genomics and Molecular Mechanisms of Plant's Response to Abiotic and Biotic Stresses


[Avinash Marwal](#), [Rajesh Kumar](#), [Rakesh Kumar Verma](#), [Megha Mishra](#), [R. K. Gaur](#) & [S.M. Paul Khurana](#)

Chapter | [First Online: 15 November 2019](#)

793 Accesses | [1 Citations](#)

Abstract

Previous two to three decades have witnessed Abiotic (temperature, light, water, salt etc.) and Biotic (bacteria, fungi, viruses etc.) stresses in crop plants to be increasing and documented as a severe menace to global food security, making it hard for the plants to endure in such circumstances. With the fast-growing population, it is now mandatory to pace with the yield and productivity accordingly, thus protection of crop plants from the abiotic and biotic stresses is a priority. The expansion of stress-tolerant crops will be significantly profitable for the poor farmers in regions of the globe that are affected by such stresses. Similarly, a number of transcription factors/regulators play crucial roles in plant stress responses. This chapter emphasizes on the genes involved in plant's response to abiotic and biotic stresses with their molecular mechanisms to summarize the current knowledge and a step further for their better understanding. Such responses need to be re-examined to generate resistant crop plants for

Access via your institution 

- Chapter EUR 29.95
Price includes VAT (India)
- DOI: 10.1007/978-981-13-8499-8_6
 - Chapter length: 16 pages
 - Instant PDF download
 - Readable on all devices
 - Own it forever
 - Exclusive offer for individuals only
 - Tax calculation will be finalised during checkout

[Buy Chapter](#)

- | | |
|--------------------------------|------------|
| eBook | EUR 213.99 |
| Softcover Book | EUR 249.99 |
| Hardcover Book | EUR 249.99 |

[Learn about institutional subscriptions](#)

[Sections](#) [Figures](#) [References](#)