1. Record Nr. UNINA9910164130403321

Titolo	Plant-Microbe Interaction: An Approach to Sustainable Agriculture / / edited by Devendra K. Choudhary, Ajit Varma, Narendra Tuteja
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2016
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (515 pages) : illustrations (some color), charts, tables
Disciplina	579.178
Soggetti	Agriculture Microbial ecology Microbiology Plant physiology Microbial Ecology Plant Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part 1: An Introduction to Plant-Microbe Interaction -- Chapter 1. Rhizosphere Interactions: Life Below Ground -- Chapter 2. Shaping the Other Sides: Exploring the Physical Architecture of Rhizosphere -- Chapter 3. Applications and Mechanisms of Plant Growth Stimulating Rhizobacteria -- Chapter 4. Microbial Ecology at Rhizosphere: Bio-engineering and Future Prospective -- Chapter 5. Mycorrhizosphere: The Extended Rhizosphere and its Significance -- Chapter 6. Arbuscular Mycorrhizae: Effect of Rhizosphere and Relation with Carbon Nutrition -- Part 2: Plant-Microbe Interaction Under Abiotic and Biotic Stress -- Chapter 7. Microbial-Mediated Amelioration of Plants Under Stress: An Emphasis on Arid and Semi-Arid climate -- Chapter 8. Bacterial ACC-Deaminase: An Eco-Friendly Strategy to Cope Abiotic Stresses for Sustainable Agriculture -- Chapter 9. Increasing Phytoremediation Efficiency of Heavy Metal Contaminated Soil using PGPRs for Sustainable Agriculture -- Chapter 10. PGPR-Mediated Amelioration of Crops Under Salt Stress -- Chapter 11. Plant-Microbes Interaction For the Removal of Heavy Metal From Contaminated Site -- Chapter 12. Bacteria-Mediated Elicitation of Induced Resistance in

Plants Upon Fungal Phytopathogen -- Chapter 13. Essential Oils as Antimicrobial Agents Against Some Important Plant Pathogenic Bacteria and Fungi -- Chapter 14. Halophilic Bacteria: Potential Bioinoculants for Sustainable Agriculture and Environment Management Under Salt Stress -- Chapter 15. Abiotic Stress Mitigation Through Plant Growth Promoting Rhizobacteria -- Part 3: Plant-Microbe Interaction and Plant Productivity -- Chapter 16. Growth Promotion Features of the Maize Microbiome – From an Agriculture Perspective -- Chapter 17. Biofertilizers: A Timely Approach for Sustainable Agriculture -- Chapter 18. Role of Beneficial Fungi in Sustainable Agricultural Systems -- Chapter 19. Significance of Arbuscular Mycorrhizal Fungi and Rhizosphere Microflora in Plant Growth and Nutrition -- Chapter 20. Prospect of Phyllosphere Microbiota : a Case Study on Bioenergy Crop Jatropha curcas -- Chapter 21. Sinker Root System in Trees with Emphasis on Soil Profile -- Chapter 22. Plant Growth Promoting Rhizobacteria Play a Role as Phytostimulator for Sustainable Agriculture -- Chapter 23. Diversity, quorum sensing and plant growth promotion by endophytic diazotrophs associated with sugarcane with special reference to Gluconoacetobacter diazotrophicus.

Sommario/riassunto

The book addresses current public concern about the adverse effect of agrochemicals and their effect on the agro-ecosystem. This book also aims to satisfy and contribute to the increasing interest in understanding the co-operative activities among microbial populations and their interaction with plants. It contains chapters on a variety of interrelated aspects of plant-microbe interactions with a single theme of stress management and sustainable agriculture. The book will be very useful for students, academicians, researcher working on plant-microbe interaction and also for policy makers involved in food security and sustainable agriculture.