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Nota di contenuto	Chapter 1. Insights into Pivotal Role of Phytohormonal Cross Talk in Tailoring Underground Plant Root System Architecture -- Chapter 2. Effects of Strigolactones on Plant Roots -- Chapter 3. Root Hair Growth and Development in Response to Nutrients and Phytohormones -- Chapter 4. Morphological and Symbiotic Root Modifications for Mineral Acquisition from Nutrient-Poor Soils -- Chapter. 5 Root Exudates and Microbial Communities Drive Mineral Dissolution and the Formation of Nano-size Minerals in Soils: Implications for Soil Carbon Storage -- Chapter 6. Root exudates dominate the colonization of pathogen and plant growth promoting rhizobacteria -- Chapter 7. Biocontrol of Soil-borne Root Pathogens: An Overview -- Chapter 8. Biological Control of Root-knot and Cyst Nematodes using Nematophagous Fungi -- Chapter 9. Optimizing Growth and Tolerance of Date Palm (Phoenix dactylifera L.) to Drought, Salinity and Vascular fusarium-induced wilt (Fusarium oxysporum) by Application of Arbuscular Mycorrhizal Fungi (AMF) -- Chapter 10. Improvement of Salt Tolerance in Rice Plants by Arbuscular Mycorrhizal Symbiosis -- Chapter 11. Bioprotection of soybean plants from drought stress by application of bacterial and fungal endophytes -- Chapter 12. Perspectives of Rhizobacteria with

ACC Deaminase Activity in Plant Growth under Abiotic Stress -- Chapter 13. Root-Microbe Interactions: Understanding and Exploitation of Microbiome -- Chapter 14. Unfolding the Role of Rhizomicrobiome towards Sustainable Agriculture -- Chapter 15. Morphological and Physiological Aspects of Symbiotic Plant-Microbe Interactions and their Significance -- Chapter 16 -- Impact of Climate Change on Root-Pathogen Interactions -- Chapter 17. Arbuscular Mycorrhizal Fungi and Their Responses to Nutrient Enrichment -- Chapter 18. Relationship Between Arbuscular Mycorrhizas and Plant Growth: Improvement or Depression? -- Chapter 19. Arbuscular Mycorrhizal Fungi Symbiosis and Conservation of Endangered Tropical Legume Trees -- Chapter 20. From mycorrhizosphere to rhizosphere microbiome: The paradigm shift -- Chapter 21. Growth Response of Different Species and Provenances of Jujube Seedlings to Inoculation with Arbuscular Mycorrhizal Fungi.

Sommario/riassunto

The book 'Root Biology' written by experts in the field, covers latest research on cellular, genetic, physiological and ecological developmental facets of root growth as well as the interaction of root with an array of microbes whether for the establishment of symbiosis, increasing plant growth or protecting plant from pathogens/attackers. Plant roots provide an excellent model to study physiological, developmental and metabolic processes at a system level. Root system architecture - an excellent creation of nature, is closely interconnected with the availability of soil nutrients. Several strategies including biotechnological interventions are gaining interest and importance for sustainable food production and enhanced resource acquisition. Such strategies have largely focused on root traits for efficient utilization of soil resources. The biotechnological application of root biology is expected to promote the production of food while maintaining ecologically and economically sustainable production systems. With a fortune of information on technical and experimental aspects useful in the laboratory, this extensive book is a valuable resource for researchers, academicians and students in the broad field of microbiology, plant and fungal biology.
