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Titolo	Advances in Soil Microbiology: Recent Trends and Future Prospects : Volume 2: Soil-Microbe-Plant Interaction / / edited by Tapan Kumar Adhya, Bibhuti Bhusan Mishra, K. Annapurna, Deepak Kumar Verma, Upendra Kumar
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ISBN	981-10-7380-5
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (VII, 238 p. 11 illus., 10 illus. in color.)
Collana	Microorganisms for Sustainability, , 2512-1901 ; ; 4
Disciplina	579.1757
Soggetti	Microbiology Microbial genetics Microbial genomics Environmental toxicology Eukaryotic Microbiology Microbial Genetics and Genomics Ecotoxicology
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	Chapter 1: Soil Microbial Diversity (Baliyarsingh) -- Chapter 2: Microbial Diversity and Soil Health in Tropical Agro-ecosystem (Chourasiya) -- Chapter 3: Plant Growth Promoting Microbes (PGPM) as Potential microbial bio-agents for eco-friendly Agriculture (Gangwar) -- Chapter 4: Plant Growth Promoting Rhrizobacteria in abiotic stress alleviation in crops (Paul) -- Capter 5: Phosphate Solubilizing Microorganisms in Sustainable Agriculture (Pradhan) -- Chapter 6: Arbuscular Mycorrhizal fungi (AMF) for sustainable rice production (Paneerselvam) -- Chapter 7: Biological Nitrogen Fixation in Cereal Crops (Garcha) -- Chapter 8: Biological Control as a Tool for Eco-friendly Management of Plant Pathogens (Sharma) -- Chapter 9: Biological control of insect pests for sustainable agriculture (Sindhu) -- Chapter 10: Soil organic matter and microbial role in plant productivity and soil fertility (Biswas).
Sommario/riassunto	This book presents a comprehensive collection of articles illustrating the importance of microbial community structure and function for

ecosystem sustainability and environmental reclamation. It addresses a diverse range of topics, including microbial diversity, physiology, genomics, ecosystem function, interaction, metabolism, and the fruitful use of microbial communities for crop productivity and environmental remediation. In addition, the book explores issues ranging from general concepts on the diversity of microorganisms in soil, and ecosystem function, to the evolution and taxonomy of soil microbiota, with future prospects. It covers cutting-edge methods in soil microbial ecological studies, rhizosphere microflora, the role of organic matter in plant productivity, biological nitrogen fixation and its genetics, microbial transformation of plant nutrients in soil, plant-growth-promoting rhizobacteria, and organic matter transformation. The book also discusses the application of microbes in biodegradation of xenobiotic contaminants. It covers bio-fertilizers and their role in sustainable agriculture and soil health, biological control of insect pests and plant pathogens, and the latest tools of omics in soil microbiology, i.e. genomics, proteomics, transcriptomics and metabolomics, which offer pioneering approaches to the exploration of microbial structure and function.