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Nota di contenuto	1. An Overall Insight into the Attributes, Interactions, and Future Applications of 'Microbial-Consortium' for Plant Growth Promotion, with Contemporary Approaches -- 2. Beneficial Microbial Mixtures for Efficient Biocontrol of Plant Diseases: Impediments and Success -- 3. Rhizobacterial Mediated Interactions for Enhanced Symbiotic Performance of the Root Nodule Rhizobia in Legumes -- 4. Plant Growth Promoting Bacterial Consortia Render Biological Control of Plant Pathogens: A Review -- 5. Phytohormonal Role of Microorganisms Involved in Bioinoculants -- 6. The Bacterial-Fungal Consortia: Farmer's Needs, Legal and Scientific Opportunities, and Constraints -- 7. Sustainable Improvement of Productivity and Quality of Agricultural Crops Using a Microbial Consortium -- 8. Consortia of Probiotic Bacteria and their Potentials for Sustainable Rice Production -- 9. Strategies to Evaluate Microbial Consortia for Mitigating Abiotic Stress in Plants -- 10. Co-inoculation of Rhizobacteria in Common Bean (<i>Phaseolus vulgaris</i>) Production in East Africa -- 11. Management of Sustainable Vegetable Production Using Microbial Consortium -- 12. Consort Interactions of the Root Endophytes <i>Serendipita</i> spp. (<i>Sebacinales</i> , <i>Agaricomycetes</i> , <i>Basidiomycota</i>) with Crop Plants -- 13. Applications of Microbial Consortia and Microbiome Interactions for

Augmenting Sustainable Agrobiolgy -- 14. Effect of Microbial Consortium Vs. Perfected Chemical Fertilizers for Sustainable Crop Growth -- 15. Bioencapsulation of Biocontrol Agents as a Management Strategy for Plant Pathogens -- 16. Designing Tailored Bioinoculants for Sustainable Agrobiolgy in Multi-stressed Environments -- 17. Development and Application of Consortia Based Microbial Bioinoculants for Sustainable Agriculture.

Sommario/riassunto

This edited volume covers all aspects of microbes in consortia; their roles in the ecological balance of soil by mineralize soil nutrients, plant growth promotion, protecting plants from disease by acting as biocontrol agents etc. Step-by-step descriptions are provided to the development and designing strategies of microbial consortia of rhizobacteria, phytohormone producing with biocontrol; ACC-deaminase producing with siderophore producing; vice-versa, and many combinations of multifaceted bacteria. The development of microbial consortia into successful bioinoculant and biofertilizers is also included in various chapters. In addition, molecular mechanisms to study the synergistic behaviors of rhizobacteria, accompanied by numerous helpful schematic drawings. Using phylogeny to justify the molecular similarity among two different bacteria identifies the possibility of microbial synergism, fruitful to development of microbial consortium and establish them in the rhizosphere with consorted mechanisms. In addition, clear drawings are included in support of understanding the natural phenomenon of synergism in below-ground ecosystem. Essential information is provided on ecological management by consorted mechanisms of rhizobacteria that directly affect 'agriculture sustainability' and an individual chapter is devoted to the understanding of future research, and addressing bottlenecks and successful steps. This book assists the academicians, researchers and NGOs in negotiating the steep learning curve involved in gaining the skills needed to perform design and development of microbial consortiums, preparation of PGPR-based fertilizers, which offers significant advantages in terms of pertaining novel knowledge on the groundbreaking research, still ongoing.
