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Altri autori (Persone)	SolankiManoj Kumar
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Nota di contenuto	Chapter 1. Microbial consortia an approach in Plant Growth Promotion and plant diseases management -- Chapter 2. Microbes Associated Activation of Plant Defense against Phytopathogens -- Chapter 3. Impact of Environmental Factors on Microbial Association with Plant -- Chapter 4. Role of Endophytic microbes for post-harvest diseases management -- Chapter 5. Utilization of Rice Husk-Derived Silica in Fertilizer and Pesticide Formulation -- Chapter 6. An application of biopesticides in control of pest and crop protection; an eco-friendly management -- Chapter 7. Beneficial Microbes in Agriculture: Recent Development and Outlook -- Chapter 8. CRISPR/Cas9-based Genome Engineering In Plants For Enhancing Disease Resistance -- Chapter 9. Biocontrol Mechanisms by Root-Associated Bacillus Species -- Chapter 10. Cyanobacteria as mediators of systematic resistance for sustainable disease control in agriculture -- Chapter 11. Microbial inoculants for the management of pesticide toxicity in plants -- Chapter 12.

Screening of microbial biocontrol agents using traditional and insilico approaches -- Chapter 13. Talaromyces spp. are promising Biocontrol Agents for Sustainable Agriculture -- Chapter 14. Metagenomics: Unveiling Microbial Communities Theme -- Chapter 15. Antimicrobial resistance: Introduction and Challenges -- Chapter 16. Multifunctional nanocomposites enhance biotherapeutics sensitivity in replication associated diseases -- Chapter 17. Blockchain Technology for Environmental Conservation -- Chapter 18. Exploring Host Immunity and Virulence in Mucorales.

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### Sommario/riassunto

This book delves deeply into the field of microbial biological control. It is the method in which microbes, predators, and pathogens interact in a complex action to defend crops from damaging pests and diseases. This conventional method, which is frequently eclipsed by modern substitutes, is a cornerstone of sustainable agriculture. In addition to providing a practical way to protect our crops, it also offers a way to preserve the delicate ecosystems' balance while being environmentally benign. This book investigates the use of microbes in sustainable agriculture. It discusses current research and collaborations using helpful bacteria, emphasizing relationships between allies and foes. For disease resistance, emerging technologies like CRISPR/Cas9 and nanotechnology are considered. Market demands for biofertilizers that increase nutritional content and act as eco-friendly insecticides are discussed. Metagenomics, efficient formulations, and soil amendments are among the contemporary tools investigated. The volume strongly emphasizes shelf-life extension, biocontrol future trends, and storage, opening the door for creative microbial-based agricultural technologies. This interdisciplinary book is useful for a diverse group of readers including microbiologists, biotechnologists, agronomist, policymakers, university students and those who are interested in the development of strategies for sustainable farming by utilizing microbial communities.

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