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Nota di contenuto	Part 1. Composting: Paradigms and Mechanisms -- 1. Compost and Compost Tea Microbiology: the “-Omics” Era -- 2. Biological Sterilisation, Detoxification and Stimulation of Cucurbitacin-containing Manure -- 3. Nematode succession during composting process -- 4. Review on Physiological Effects of Vermicomposts on Plants -- 5. Interaction of Earthworm Activity with Soil Structure and Enzymes -- 6. Survival of Pathogenic and Antibiotic Resistant Bacteria in Vermicompost, Sewage Sludge and other Types of Composts in

Temperate Climate Conditions -- Part 2. Modern Tools and Techniques for Composting Research -- 7. Molecular Tools and Techniques for Understanding the Microbial Community Dynamics of Vermicomposting -- 8. Molecular Tools and Techniques for Understanding the Microbial Community Dynamics of Vermicomposting -- 9. Recent Advances in Assessing the Maturity and Stability of Compost -- 10. Application of Nanotechnology to Research on the Microbiology of Composting -- Part 3. Composting Applications -- 11. Bioremediation of Pesticides in Soil Through Composting: Potential and Challenges -- 12. Current Trends and Insights on Compost Utilization Studies - Crop Residue Composting to Improve Soil Organic Matter in Sugarcane Cultivation, Tamil Nadu, India -- 13. Applications of Streptomyces spp. Enhanced Compost in Sustainable Agriculture.

Sommario/riassunto

This book highlights the latest findings on fundamental aspects of composting, the interaction of various microorganisms, and the underlying mechanisms. In addition to addressing modern tools and techniques used for composting research, it provides an overview of potential composting applications in both agriculture and environmental reclamation. Composting is the process of organic waste decomposition, mediated by microorganisms. The end-product is called ‘compost’ and can be used as a supplement to improve soil fertility. As the municipal waste generated in most developing countries contains a substantial amount of organic matter suitable for composting, this technology offers a win-win opportunity for stakeholders in terms of disposing of organic waste and providing organic fertilizers for agriculture. In addition, using compost reduces the dependency on harmful chemical fertilizers, and represents a sustainable and environmentally friendly alternative.