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in Smallholder Farming Systems -- Chapter 9. Vermicompost Potential as Biofertilizers in Smallholder Farming Systems -- Chapter 10. Microorganisms in Sustainable Soil Fertility Management -- Chapter 11. Harnessing Biofertilizers for Sustainable Cereal Production -- Chapter 12. Mitigating Abiotic Stress In Sorghum bicolor Using Biofertilizer -- Chapter 13. The Potential of Arbuscular Mycorrhizae Fungi Biochar Biofertilizer in Managing the Parasitic Weed Striga Spp -- Chapter 14. The role of omics in the Future irection of Biofertilizer Innovation -- Chapter 15. The Synergy of Nanotechnology and Biofertilizers: A Pathway to Sustainable Growth -- Chapter 16. Biosynthesis of Nanoparticles for Enhancing Plant Growth, Development, and Yield -- Chapter 17. Socio-Economic and Policy Obstacles to Biofertilizer Adoption in African Agriculture: A Thematic Chapter -- Chapter 18. Biostimulants and Biopesticides: Multifunctional Biological Solutions for African Agriculture -- Chapter 19. Biofertilizers and Aquaculture in Africa: Enhancing Sustainable Fish Farming and Agricultural Synergies -- Chapter 20. A Review of Biofertilizers' Role in Enhancing Cropland Ecosystem Services and Mitigating Climate Change in Africa.

Sommario/riassunto

This book explores the potential of biofertilizers as a natural and eco-friendly alternative for promoting sustainable soil fertility management among smallholder farmers in Africa. It highlights current research trends on biofertilizers that can be adopted by resource-poor farmers, equipping stakeholders with knowledge to unlock relevant sustainable farming practices. By identifying key research gaps in the field, this comprehensive volume paves the way for further advancements and future research directions, ensuring continued innovation in developing and delivering effective biofertilizer solutions for African farmers. The chapters focus on key aspects such as the potential and long-term sustainability of biofertilizers, research trends and advancements in biofertilizer technology, and addressing resource limitations faced by smallholder farmers. This book is an essential resource for researchers, policymakers, extension workers, and, most importantly, the farmers themselves.