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Nota di contenuto	Contents; Editors; Abbreviations; Part I: Approaches to Defining, Monitoring, Evaluating and Managing Soil Quality; 1 Introduction; 2 Defining Soil Quality; 3 Monitoring and Evaluating Soil Quality; 4 Managing Soil Quality; 5 Concluding Remarks; Part II: Selected Methods; 6 Microbial Biomass and Numbers; 6.1 Estimating Soil Microbial Biomass; 6.2 Microbial Biomass Measurements by Fumigation-Extraction; 6.3 Substrate-induced Respiration; 6.4 Enumeration and Biovolume Determination of Microbial Cells; 7 Soil Microbial Activity; 7.1 Estimating Soil Microbial Activity; 7.2 Soil Respiration 7.3 Soil Nitrogen Mineralization 7.4 Nitrification in Soil; 7.5 Thymidine and Leucine Incorporation to Assess Bacterial Growth Rate; 7.6 N[Sub (2)]O Emissions and Denitrification from Soil; 7.7 Enzyme Activity Profiles and Soil Quality; 8 Soil Microbial Diversity and Community Composition; 8.1 Estimating Soil Microbial Diversity and Community Composition; 8.2 Soil Microbial Community Fingerprinting Based on Total Community DNA or RNA; 8.3 Phospholipid Fatty Acid (PLFA)

Analyses; 8.4 Substrate Utilization in Biolog[Sup(TM)] Plates for Analysis of CLPP

9 Plant-Microbe Interactions and Soil Quality 9.1 Microbial Ecology of the Rhizosphere; 9.2 Nodulating Symbiotic Bacteria and Soil Quality; 9.3 Contribution of Arbuscular Mycorrhiza to Soil Quality and Terrestrial Ecotoxicology; 9.4 Concepts and Methods to Assess the Phytosanitary Quality of Soils; 9.5 Free-living Plant-beneficial Microorganisms and Soil Quality; 10 Census of Microbiological Methods for Soil Quality; Index;

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Sommario/riassunto

With growing concern about the protection of soil quality and biodiversity many countries have established regional and national programmes to monitor soil quality. This book reviews the theory and practice of a range of the various microbiological methods used within these programmes. The first section gives an overview of approaches to monitoring, evaluating and managing soil quality. The second section provides a practical handbook with detailed descriptions of the methods. The methods are described in chapters on soil microbial biomass and numbers, soil microbial activity, soil microbial d

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