1. Record Nr. UNINA9910298375103321 Interactions in Soil: Promoting Plant Growth / / edited by John Dighton, **Titolo** Jennifer Adams Krumins Pubbl/distr/stampa Dordrecht:,: Springer Netherlands:,: Imprint: Springer,, 2014 **ISBN** 94-017-8890-1 Edizione [1st ed. 2014.] 1 online resource (240 p.) Descrizione fisica Collana Biodiversity, Community and Ecosystems, , 2211-7822; ; 1 Disciplina 631.4 Soggetti Soil science Soil conservation Ecology **Biodiversity** Agriculture Forests and forestry Microbial ecology Soil Science & Conservation Forestry Microbial Ecology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Note generali Description based upon print version of record. Nota di contenuto Preface -- 1. Introduction: Soils and Their Promotion of Plant Growth; J. Dighton -- 2. Soils supporting Biodiversity; E. Havlicek, E. Mitchell -- 3. Beneficial Interactions in the Rhizosphere; W. H. G. Hol et al -- 4. Trophic Interactions in Soil that Support Primary Production: J. Krumins -- 5. Soils Suppressing Biodiversity; G. Pérès -- 6. Root Pathogens; A. Termorshuizen -- 7. Non-Trophic Interactions: Allelopathy; P. Pavlovi

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Sommario/riassunto

Soil is a heterogeneous medium which supports more biodiversity per unit volume than any other system. This book explores how that

biodiversity is translated into ecological functions supporting plant growth by providing both essential minerals for plant growth and other growth promoting factors like pathogen suppression. Interactions between plants and associated soil organisms evolve through trophic and non-trophic feedback mechanisms which are moderated by plant-plant interactions (allelopathy), invasive plant species and land use change and pollution. These factors are discussed in natural, agricultural and urban soil systems to provide a framework for a holistic understanding of soil as a dynamic living entity.