

1. Record Nr.	UNINA9910141170203321
Titolo	Ecological aspects of nitrogen metabolism in plants // Editors, Joe C. Polacco, Christopher D. Todd
Pubbl/distr/stampa	Chichester, West Sussex, UK ; ; Ames, Iowa, : Wiley-Blackwell, c2011
ISBN	9780470959398 0470959398 9780470959404 0470959401 9780470959381 047095938X
Descrizione fisica	1 online resource (1055 p.)
Classificazione	SCI008000
Altri autori (Persone)	PolaccoJoseph C. <1944-> ToddChristopher D
Disciplina	572/.5442
Soggetti	Plants - Effect of nitrogen on Plant ecology Plants - Metabolism Plant-microbe relationships Plant-soil relationships Nitrogen cycle
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Contents; Halftitle page; Title page; Copyright; Contributors; Preface; Section 1 The Nitrogen Cycle; Chapter 1: The New Global Nitrogen Cycle; Section 2 Plant-Soil Microbe Interactions; Chapter 2: Plant Associations with Mycorrhizae and Rhizobium-Evolutionary Origins and Divergence of Strategies in Recruiting Soil Microbes; Chapter 3: Arbuscular Mycorrhizas and N Acquisition by Plants; Chapter 4: Ectomycorrhiza and Nitrogen Provision to the Host Tree; Chapter 5: Proteins in the Rhizosphere: Another Example of Plant-Microbe Exchange; Chapter 6: Actinorhizal Symbioses Chapter 7: Two in the Far North: The Alder-Frankia Symbiosis, with an Alaskan Case StudyChapter 8: The Path of Rhizobia: From a Free-Living

Soil Bacterium to Root Nodulation; Chapter 9: Exploiting Mycorrhizae and Rhizobium Symbioses to Recover Seriously Degraded Soils; Section 3 Epi- and Endo-Phytic Microbes; Chapter 10: Nitrogen: Give and Take from Phylloplane Microbes; Chapter 11: N₂-Fixing Endophytes of Grasses and Cereals; Section 4 Arthropods; Chapter 12: Effects of Insect Herbivores on the Nitrogen Economy of Plants; Chapter 13: Plant Defense Proteins That Inhibit Insect Peptidases
Chapter 14: Nutrient Acquisition and Concentration by Ant Symbionts: The Incidence and Importance of Biological Interactions to Plant Nutrition
Section 5 Environmental Signalling in N Acquisition; Chapter 15: The Functions of Flavonoids in Legume-Rhizobia Interactions; Chapter 16: Plant Hormones and Initiation of Legume Nodulation and Arbuscular Mycorrhization; Chapter 17: Nitric Oxide as a Signal Molecule in Intracellular and Extracellular Bacteria-plant Interactions; Index

Sommario/riassunto

Ecological Aspects of Nitrogen Acquisition covers how plants compete for nitrogen in complex ecological communities and the associations plants recruit with other organisms, ranging from soil microbes to arthropods. The book is divided into four sections, each addressing an important set of relationships of plants with the environment and how this impacts the plant's ability to compete successfully for nitrogen, often the most growth-limiting nutrient. Ecological Aspects of Nitrogen Acquisition provides thorough coverage of this important topic, and is a vitally important resource
