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| Nota di contenuto | Front cover; Mycorrhizal symbiosis; Copyright page; Contents; Preface; Introduction; Section 1 Arbuscular mycorrhizas; Chapter 1 The symbionts forming arbuscular mycorrhizas; Introduction; Arbuscular mycorrhizal fungi; The range of plants forming arbuscular mycorrhizas; Non-mycorrhizal plants; Fossil history of arbuscular mycorrhizas; Fungus-plant specificity; Ecological considerations; Conclusions; Chapter 2 Colonization of roots and anatomy of arbuscular mycorrhizas; Introduction; Sources of inoculum-overview; Morphology and anatomy of arbuscular mycorrhizas; Conclusions Chapter 3 Genetic, cellular and molecular interactions in the establishment of arbuscular mycorrhizas Introduction; Key steps in colonization; Cytological changes during root colonization; Genetic approaches to understanding AM colonization - interactions of AM fungi with non-hosts and mutants; Changes in gene transcription during AM colonization; Effects of AM colonization on plant defence responses; Conclusions; Chapter 4 Growth and carbon economy of arbuscular mycorrhizal symbionts; Introduction; Effects of AM colonization on plant nutrition and growth - overview C transfer to the fungal partner Cost-benefit analysis; Variations in AM responsiveness of plants; AM mycelial links between plants: importance |

in carbon allocation in a plant community; Conclusions; Chapter 5 Mineral nutrition, toxic element accumulation and water relations of arbuscular mycorrhizal plants; Introduction; Phosphorus availability in soil; Effects of arbuscular mycorrhizal colonization on plant phosphorus nutrition; Nitrogen nutrition; Uptake of other nutrients; Interplant transfer of nutrients; Water relations; Conclusions; Section 2 Ectomycorrhizas
Chapter 6 Structure and development of ectomycorrhizal roots
Introduction; Taxonomic, evolutionary and geographic aspects of the ectomycorrhizal symbiosis; Specificity in ectomycorrhizal symbioses; Genetics of ectomycorrhizal fungi; The formation of ectomycorrhizas; Molecular approaches to the study of ectomycorrhizal communities; Succession and replacement of fungi on roots and root systems; Conclusions; Chapter 7 Ectendo- and arbutoid mycorrhizas; Introduction; Ectendomycorrhizas; Ectendomycorrhizal fungi; The occurrence, taxonomic status and function of dark septate (DS) fungi
Arbutoid mycorrhizas Conclusions; Chapter 8 Growth and carbon allocation of ectomycorrhizal symbionts; Introduction; Carbon supplies for ectomycorrhizal fungi; Carbon distribution in intact plant-fungus systems; Non-nutritional effects upon carbon assimilation; Community level patterns of carbon allocation; Conclusions; Chapter 9 Nitrogen mobilization and nutrition in ectomycorrhizal plants; Introduction; Use of N by ectomycorrhizal fungi in pure culture; Use of N by mycorrhizal roots and intact plants; Conclusions
Chapter 10 Phosphorus and base cation nutrition, heavy metal accumulation and water relations of ectomycorrhizal plants

Sommario/riassunto

The roots of most plants are colonized by symbiotic fungi to form mycorrhiza, which play a critical role in the capture of nutrients from the soil and therefore in plant nutrition. Mycorrhizal Symbiosis is recognized as the definitive work in this area. Since the last edition was published there have been major advances in the field, particularly in the area of molecular biology, and the new edition has been fully revised and updated to incorporate these exciting new developments. Over 50% new material Includes expanded color plate section Covers all aspects of mycorrhiz
