

REVIEW

Diversity of arbuscular mycorrhizal fungi in mangrove ecosystem – A review

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Mangroves form a special habitat occupying the marine intertidal zone in tropical and sub-tropical regions. These forests are one of the highly productive ecosystems in the world. However, there are several factors affecting their growth especially the availability of nutrients like phosphorus. Arbuscular mycorrhizal (AM) fungi are Glomeromycotan fungi capable of enhancing the uptake of nutrients especially P in higher plants. Additionally, these fungi also assist plants in stress tolerance and reduced nutrient leaching. However, several factors like flooding, salinity and pH influence the colonization and sporulation of AM fungi. This review considers aspects of AM fungal diversity in mangrove ecosystem. Interaction of AM fungi with other rhizosphere microbes, glomalin related soil protein (GRSP), studies on the importance of AM fungi in mangrove plant growth are discussed. It is concluded that the exploration of microbial diversity in crucial habitats like mangroves plays a significant role towards the establishment of conservation and restoration strategies.

Keywords: arbuscular mycorrhizal fungi, P uptake, mycorrhiza helper bacteria, glomalin related soil protein, growth studies
