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AM真菌与植物的互作及其对植物种间竞争的影响

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Interaction between Arbuscular Mycorrhizal Fungi and Host Plant,and Their Impacts on Plants Interspecific Competition

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摘要 丛植菌根（AM）是自然界广泛存在的一种植物根系与菌根真菌的共生体。种间竞争是群落中不同物种之间由于资源的稀缺性和可利用性之间的差异而产生的相互竞争效应。二者均是影响植物群落结构和功能的重要因素。因而探究AM真菌和植物种间竞争之间的相互作用，对于揭示植物群落的动态变化、结构组成以及维持群落的稳定性和多样性具有重要的意义。基于此，本文以丛枝菌根真菌为中心，在探讨AM真菌与植物互作效应的基础上，通过对AM真菌与植物群落的排除效应和共存效应的机理分析，探究AM真菌对植物种间竞争的影响，同时对AM真菌与种间竞争未来的研究方向进行了展望。

关键词： 丛枝菌根 种间竞争 植物 群落 竞争排除 竞争共存

Abstract： Arbuscular mycorrhizal (AM) fungi and inter specific competition are considered as the two main factors which affect plant community structures and stabilities in natural and artificial ecosystemsAccording to the effects of symbionts, the interaction between AM fungi and plant interspecific competition has become one of the hotspots in applied and theoretical ecology, which study on revealing the dynamic, structure, biodiversity and stability of plant community. On the basis of this, the objective of this study was to investigate the interaction between AM fungi and their host plants, which showed that there were positive benefits to both of AM fungi and host plants. According to the influence of AM symbionts, there were two kinds of intercompetition effects: the competitive exclusion and the competitive coexistence. The impacts, mechanisms, and strategies which related to interspecific competition with AM fungi were given out. Otherwise, the perspective of AM fungi and interspecific competition were also discussed.

Keywords： arbuscular mycorrhizal inter specific competition plant community competitive exclusion competitive coexistence

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