

研究报告

# 龙脑香科植物对丛枝菌根真菌的影响

石兆勇<sup>1,2</sup>; 孟祥霞<sup>2</sup>; 陈应龙<sup>1</sup>; 刘润进<sup>2</sup>

<sup>1</sup>中国林业科学研究院热带林业研究所, 广州 510520; <sup>2</sup>莱阳农学院菌根研究室, 莱阳 265200

收稿日期 2003-12-2 修回日期 2004-3-22 网络版发布日期 接受日期

## 摘要

在天然林地和温室盆栽条件下, 比较研究了龙脑香科植物对丛枝菌根 (Arbuscular mycorrhizas, AM) 真菌孢子密度、相对多度、频度、属的组成、丰度和侵染状况等方面的影响. 结果表明, 用坡垒作盆栽寄主加富培养后, 菌根侵染率、泡囊、丛枝和侵入点都低于原采样植物, 以原坡垒土壤中栽植苗木的侵染率为最高, 可达20.3%; 而以望天树根围土壤栽植的苗木为最低, 仅为10.6%; 坡垒还不同程度地改变了原采样植物根围土壤中AM真菌孢子的密度、相对多度、频度、属的组成、丰度等. 在4种土壤中, 栽植坡垒苗木后, AM真菌的孢子密度都有不同程度的增长. 采用与原采样相同种类的植物作为AM真菌加富培养的寄主更有利于促进AM真菌的生长发育、保持AM的多样性.

关键词 [AM真菌; 频度; 孢子密度; 相对多度; 龙脑香科植物; 坡垒](#)

分类号

## Effects of Dipterocarpaceae on arbuscular mycorrhizal fungi

SHI Zhaoyong<sup>1,2</sup>, MENG Xiangxia<sup>2</sup>, CHEN Yinglong<sup>1</sup>, LIU Runjin<sup>2</sup>

<sup>1</sup>Institute of Tropical Forestry, Chinese Academy of Forestry, Guangzhou 510520, China; <sup>2</sup>Mycorrhiza Laboratory, Laiyang Agricultural College, Laiyang 265200, China

### Abstract

An investigation was carried out on the colonization percentage, spore density, relative abundance, occurrence frequency, and species richness of arbuscular mycorrhizal (AM) fungi on 4 species of Dipterocarpaceae trees grown both in natural forests in Yunnan and Hainan Provinces and in greenhouse pots. The results showed that all dipterocarp species were able to form AM, the colonization rates ranged from 30.6% to 45.3%, 37% on average. *Hopea hainanensis* (Dipterocarpaceae) seedlings without AM fungal colonization were cultivated in pots with soil collected from Dipterocarpaceae rhizosphere, and harvested a year later. The colonization rate of the seedlings ranged from 10.6% to 20.3%, 14.2% on average, indicating the significant effect of host plants on AM fungi frequency. The relative abundance of *Glomu*, *Acaulospora* and *Gigaspora* also varied with host plants. It was concluded that the dominant AM fungi in the rhizospheric soil of dipterocarp plants were *Acculospora* spp. and *Glomus* spp. Using the same species of Dipterocarpaceae as host plants might promote the

扩展功能	
本文信息	
▶	<a href="#">Supporting info</a>
▶	<a href="#">PDF(338KB)</a>
▶	<a href="#">[HTML全文](0KB)</a>
▶	<a href="#">参考文献</a>
服务与反馈	
▶	<a href="#">把本文推荐给朋友</a>
▶	<a href="#">加入我的书架</a>
▶	<a href="#">加入引用管理器</a>
▶	<a href="#">复制索引</a>
▶	<a href="#">Email Alert</a>
▶	<a href="#">文章反馈</a>
▶	<a href="#">浏览反馈信息</a>
相关信息	
▶	<a href="#">本刊中 包含</a>
	<a href="#">“AM真菌; 频度; 孢子密度; 相对多度; 龙脑香科植物; 坡垒” 的相关文章</a>
▶	本文作者相关文章
·	<a href="#">石兆勇</a>
·	
·	<a href="#">孟祥霞</a>
·	<a href="#">陈应龙</a>
·	<a href="#">刘润进</a>

growth and development of AM fungi, and increase the AM diversity.

**Key words**

[Hopea hainanensis](#) [Dipterocarpaceae](#) [Arbuscular mycorrhizal fungi](#) [Frequency](#) [Spore density](#) [Relative abundance](#)

DOI:

---

通讯作者