

影响丛枝菌根真菌孢子萌发的几种因素研究

董昌金^{1,2};赵斌¹

1.华中农业大学教育部农业微生物重点开放实验室 湖北武汉430070;2.湖北师范学院生物系 湖北黄石435002

Effect of several factors on germination of AM fungal spores

DONG Chang-jin^{1,2};ZHAO Bin^{1*}

1. key Lab. of Agric. Microbiol., Ministry of Education, Huazhong Agricu. Univ., Wuhan 430070, China; 2. The Dept. of Biology; Hubei Normal Univ.; Huangshi 435002; China

[摘要](#)[参考文献](#)[相关文章](#)Download: [PDF \(2251KB\)](#) [HTML](#) 0KB Export: [BibTeX](#) or [EndNote \(RIS\)](#) [Supporting Info](#)

摘要 对丛枝菌根真菌孢子萌发的几种影响因素进行了研究。结果表明,土壤是丛枝菌根真菌孢子萌发最适宜的培养基;寄主植物根的分泌物对孢子萌发有显著的促进作用。重金属Cd和Pb含量过高时(>50mg kg)抑制真菌孢子的萌发。培养基中有效P含量较低时(KH₂PO₄添加量为0~80mg L),对孢子萌发影响较小,高浓度的有效P(KH₂PO₄添加量大于100mg L)对孢子萌发有一定的抑制作用。培养基的pH值过高(pH8.0以上)或过低(pH5.5以下)抑制孢子萌发。生长激素对孢子萌发率没有显著性影响。对于有休眠现象的丛枝菌根真菌,4℃低温处理4~6周,可打破休眠孢子的休眠,显著提高休眠孢子的萌发率。

关键词: 丛枝菌根真菌 孢子萌发 重金属 磷水平 生长刺激素 丛枝菌根真菌 孢子萌发 重金属 磷水平 生长刺激素

Abstract: Several factors that influence germination of arbuscular mycorrhizal fungus (AMF) spores were investigated in this study. The results showed that soil based medium was most favorable for germination of AMF spores; secretion of plant roots enhanced the germination of spores obviously. However, heavy metal Cd²⁺ and Pb²⁺ could restrain the germination of AMF spores when their concentration reached 50mg/kg in water agar medium. Generally low concentration phosphorus (KH₂PO₄ was 0-80mg/L) almost had no influence on the germination of AMF spores tested. But high concentration phosphorus (KH₂PO₄ was 100-200mg/L) would restrain the germination of spores. pH restrained spore germination when it was over pH 8.0 or below pH 5.5 in the medium. Hormone had no obvious influence on spore germination. Dormancy of dormant spores could be ceased, and the germinant rate of dormant spores could be enhanced obviously by putting them in 4℃ low temperature for 4-6 weeks.

Keywords:

引用本文:

董昌金^{1,2};赵斌¹.影响丛枝菌根真菌孢子萌发的几种因素研究[J] 植物营养与肥料学报, 2003,V9(4): 489-DONG Chang-jin^{1,2}; ZHAO Bin¹. Effect of several factors on germination of AM fungal spores[J] Acta Metallurgica Sinica, 2003,V9(4): 489-

Service

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [Email Alert](#)
- ▶ [RSS](#)

[作者相关文章](#)