

植物营养与肥料学报 » 2004, Vol. 10 » Issue (2) :202- DOI: [10.1007/s11434-004-0020-4](#)

研究论文 最新目录 | 下期目录 | 过刊浏览 | 高级检索 << Previous Articles | Next Articles >>

硅对黄瓜白粉病抗性的影响及其生理机制

魏国强;朱祝军;钱琼秋;李娟

浙江大学园艺系 浙江杭州310029

Effect of silicon on resistance of cucumber powdery mildew and its physiological mechanism

WEI Guo-qiang;ZHU Zhu-jun;QIAN Qiong-qiu;LI Juan *

Department of Horticulture; Zhejiang University; Hangzhou 310029; China

摘要	参考文献	相关文章
----	------	------

Download: [PDF](#) (355KB) [HTML](#) 0KB Export: [BibTeX](#) or [EndNote](#) (RIS) [Supporting Info](#)

摘要 以黄瓜感病品种为材料,研究了施硅和诱导接种白粉菌对抗坏血酸过氧化物酶(AsA-POD)、脱氢抗坏血酸还原酶(DR)、苯丙氨酸解氨酶(PAL)、多酚氧化酶(PPO)活性与酚类物质含量变化的影响。结果表明:诱导接种后,营养液中加硅酸盐显著降低黄瓜白粉病病情指数,显著提高了黄瓜叶片中AsA-POD、PPO的活性,而DR、PAL活性低于不施硅处理,但差异不显著。施硅处理的酚类物质含量较高,并显著降低病情指数。

关键词: 黄瓜 白粉病 硅 酶活性 酚类物质 黄瓜 白粉病 硅 酶活性 酚类物质

Abstract: Solution culture experiments was conducted with a susceptible cucumber cultivar to investigate the effects of soluble silicon and inoculation with *Sphaerotheca fuliginea* on activities of leaves ascorbate peroxidase(AsA-POD), dehydroascorbate reductase(DR),phenylalanine ammonia-lyase(PAL),polyphenol oxidase(PPO) and phenolic compound content in cucumber leaves. The results showed that the disease index after inoculation was significantly decreased by Si supplied(Si+). The activities of AsA-POD and PPO in the leaves of Si supplied(Si+) plants were significantly enhanced. The activities of DR and PAL in the leaves of Si deprived(Si-)plants were slightly higher than in those of Si supplied(Si+) plants,while no significant difference between them. The content of phenolic compound was higher in the leaves of Si supplied(Si+) plants than those of Si deprived(Si-) plants.

Keywords:

引用本文:

魏国强;朱祝军;钱琼秋;李娟.硅对黄瓜白粉病抗性的影响及其生理机制[J] 植物营养与肥料学报, 2004,V10(2): 202-

WEI Guo-qiang; ZHU Zhu-jun; QIAN Qiong-qiu; LI Juan .Effect of silicon on resistance of cucumber powdery mildew and its physiological mechanism[J] Acta Metallurgica Sinica, 2004,V10(2): 202-

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