

钙对茄子嫁接苗生长和抗冷性的影响

陈贵林¹;高洪波¹;乜兰春¹;尚庆茂²;刘中笑²

1.河北农业大学园艺学院 河北保定071001;2.中国农业科学院蔬菜花卉研究所 北京100081

Effect of calcium on growth and cold resistance of grafted eggplant seedlings

CHEN Gui lin ¹;GAO Hong bo ¹;NIE Lan chun ¹;SHANG Qing mao ²;LIU Zhong xiao ² *

1 Dept. of Horticulture;Hebei Agric. Univ.;Baoding 071001;China; 2 Inst. of vegetables and flowers;CAAS;Beijing 100081;China

[摘要](#)[参考文献](#)[相关文章](#)Download: [PDF \(2443KB\)](#) [HTML 0KB](#) Export: [BibTeX](#) or [EndNote \(RIS\)](#) [Supporting Info](#)

摘要 研究了营养液缺Ca处理对茄子嫁接苗抗冷效应的影响。结果表明,缺Ca严重影响了植株的生长发育。在低温胁迫下,与供Ca处理相比,缺Ca处理显著降低了茄子嫁接苗和自根苗叶片总可溶性蛋白、热稳定蛋白和可溶性糖含量,细胞内可溶性Ca和结合Ca含量也显著降低。在相同的低温胁迫时间内,嫁接苗的总可溶性蛋白、热稳定蛋白、可溶性糖含量、细胞内可溶性Ca和结合Ca含量显著高于自根苗。低温胁迫下茄子嫁接苗总可溶性蛋白、热稳定蛋白、可溶性糖含量的提高是由于嫁接苗细胞内可溶性Ca和结合Ca含量的变化引起的。表明Ca含量的变化是其抗冷性强的内在原因,对增强茄子嫁接苗碳水化合物含量和提高植株抗冷性方面起着重要的作用。

关键词: 缺钙 茄子嫁接苗 生长 抗冷性 缺钙 茄子嫁接苗 生长 抗冷性

Abstract: The effects of calcium on chilling resistance of grafted and own root eggplant seedlings under chilling stress were studied. Solution culture was conducted to study the effects of calcium deficient treatment on growth and cold resistance of grafted eggplant seedlings. The results showed that under the calcium deficient conditions the growth of seedlings was seriously inhibited. The contents of total soluble protein, heat stable protein, soluble sugar, intracellular soluble calcium and bound calcium in grafted and own root calcium deficient eggplant seedling leaves were obviously lower than those of calcium sufficiency under low temperature condition. The contents of total protein, heat stable protein, soluble sugar, intracellular soluble calcium and bound calcium of grafted seedlings were all obviously higher than those of own root seedlings under the same stress. The study suggested that the higher carbohydrate contents of grafted seedlings might be caused by intracellular calcium variations. The variations of calcium contents were perhaps the main reason that the grafted seedlings were higher in cold resistance than own root seedlings. As a result calcium played an important role in increasing the contents of carbohydrate and enhancing cold resistances.

Keywords:

引用本文:

陈贵林¹;高洪波¹;乜兰春¹;尚庆茂²;刘中笑².钙对茄子嫁接苗生长和抗冷性的影响[J] 植物营养与肥料学报, 2002,V8(4): 478-CHEN Gui lin ¹;GAO Hong bo ¹;NIE Lan chun ¹;SHANG Qing mao ²;LIU Zhong xiao ² .Effect of calcium on growth and cold resistance of grafted eggplant seedlings[J] Acta Metallurgica Sinica, 2002,V8(4): 478-

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](#)