



玉米幼苗热激诱导抗冷性过程中钙的效应

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The effect of heat shock associated with calcium on the resistance of maize seedlings to chilling

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全文: PDF (276 KB) HTML (KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 玉米幼苗在冷胁迫前经过热激处理或CaCl₂浸种后再热激处理,其存活率,抗氧化酶GR的活性、可溶性蛋白质中热稳定蛋白质和游离脯氨酸的含量在冷胁迫中均发生了变化,发现热激处理幼苗的这些参数高于对照,而最高的是CaCl₂浸种后再热激处理的,表明热激能提高玉米幼苗的抗冷性,而Ca²⁺对上述热激处理有加强作用.

关键词: 玉米幼苗 热激 CaCl₂

Abstract: The survival rate,GR activity and the content of heat stable protein and proline of maize seedlings were surveyed after the seeds were soaked with CaCl₂ solution and/or the seedlings were shocked with heat prior to chilling treatment.It was found these parameters of the heat shocked seedlings were higher than that of contrast,and the highest ones of them were is that of seedlings which were treated by heat shock associated with CaCl₂ solution.So it is suggested heat shock pretreatment can raise the resistance of plants to chilling, and Ca²⁺ can strengthen this function of heat shock.

Key words: maize seedlings heat shock CaCl₂

收稿日期: 2003-05-02;

基金资助:国家自然科学基金资助项目(39860007);云南省自然科学基金重点项目(98C002Z);教育部高校优秀青年教师教学科研奖励计划资助项目.

引用本文:

郭丽红,陈善娜,龚明. 玉米幼苗热激诱导抗冷性过程中钙的效应[J]. 云南大学学报(自然科学版), 2003, 25(5): 449-452462.

GUO Li-hong,CHEN Shan-na,GONG Ming. The effect of heat shock associated with calcium on the resistance of maize seedlings to chilling[J]. , 2003, 25(5): 449-452462.

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编辑出版：云南大学学报编辑部（昆明市翠湖北路2号，650091）

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