棉花学报
Cotton Science
主管：中国科学技术协会
主办：中国农学会
承办：中国农业科学院棉花研究所

棉花学报 » 2010, Vol. 22 » Issue (5) :479-485 DOI: 1002-7807（2010）05-0479-07

绿盲蝽危害对棉花防御性酶活性及丙二醛含量的诱导

谭永安，柏立新，肖留斌，魏书艳，赵洪霞

江苏省农业科学院植物保护研究所，江苏 南京 210014

Herbivore Stress by *Lygus lucorum* Inducing Protective Enzyme Activity and MDA Content on Different Cotton Varieties

TAN Yong-an，BAI Li-xin，XIAO Liu-bin，WEI Shu-yan，ZHAO Hong-xia*

Institute of Plant Protection, *Jiangsu Academy of Agricultural Sciences*, *Nanjing* 210014, *China*

摘要 参考文献 相关文章

Download: PDF (964KB) HTML 1KB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 以2种转基因棉品种国抗 22、sGK321 及其亲本泗棉 3 号、石远 321 为材料，研究受绿盲蝽危害胁迫后，其叶片防御性酶活性及丙二醛含量等生理指标的动态。结果表明：接种绿盲蝽前后，2 种转基因棉花品种叶片防御性酶活性及丙二醛含量与其亲本棉花相比差异均不显著，说明外源基因的导入对棉花各项生理指标的变化无影响。同一棉花品种在绿盲蝽不同刺吸诱导的时间中，叶片防御性酶活性及丙二醛含量差异均达到极显著水平；在品种和接虫时间互作效应中，SOD、MDA、PAL 活性或含量差异达显著或极显著水平，说明品种与接虫时间在这几个指标水平上存在真实的交互作用，而其余生理指标的差异不显著。

关键词： 棉花 绿盲蝽 危害 防御性酶 丙二醛

Abstract： The dynamics of the activities of protective enzymes and MDA content in two kinds of genetically modified (GM) cotton varieties and their non-GM parents after being piercing-sucked by *Lygus lucorum* were studied. The results showed that: before and after the vaccination of *Lygus lucorum*, there were no significant difference on the activities of protective enzymes and MDA content between two kinds of GM cotton varieties and their non-GM parents, so it has no effect on physiological indices when exogenous genes were introduced into cotton. Throughout the period of *Lygus lucorum*'s attacking, there was very significant difference in the activities of protective enzymes and MDA content to the same cotton variety; the three indicators, SOD, MDA and PAL activities or content, showed significant or very significant differences in the interaction effect between variety and bug accepting time, and the rest of the interaction was not significant.

Keywords： cotton *Lygus lucorum* herbivore stress protective enzymes malondialdehyde

Received 2010-03-19;

Fund:

国家“十一”五重大科技支撑计划（2006BAD08A07）；现代农业产业技术体系建设专项资金；国家农业行业专项（200803011-7）

About author: 谭永安(1982-)，男，硕士，kellytan001@163.com

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
谭永安
柏立新
肖留斌
魏书艳
赵洪霞

引用本文:

谭永安， 柏立新， 肖留斌， 魏书艳， 赵洪霞.绿盲蝽危害对棉花防御性酶活性及丙二醛含量的诱导[J] 棉花学报, 2010,V22(5): 479-485

TAN Yong-An, BAI Li-Xin, XIAO Liu-Bin, WEI Shu-Yan, ZHAO Hong-Xia.Herbivore Stress by *Lygus lucorum* Inducing Protective Enzyme Activity and MDA Content on Different Cotton Varieties[J] Cotton Science, 2010,V22(5): 479-485

链接本文:

http://journal.cricaas.com.cn:8082/mhxb/CN/1002-7807（2010）05-0479-07 或 http://journal.cricaas.com.cn:8082/mhxb/CN/Y2010/V22/I5/479