

作物遗传育种·生物技术

辣椒细胞质雄性不育系的物质代谢和过氧化物酶分析*

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摘要 通过对辣椒细胞质雄性不育系与保持系叶片和不同发育时期的花蕾的物质代谢及对过氧化物酶活性的分析, 发现随着花蕾的发育, 不育系大花蕾可溶性糖的含量明显低于小、中花蕾时期, 而保持系可溶性糖的含量则保持一直升高的态势; 不育系小花蕾蛋白质的含量较中、大花蕾时期高, 而保持系花蕾蛋白质的含量一直升高; 不育系脯氨酸含量略有下降, 而保持系花器中游离脯氨酸迅速积累, 含量明显高于不育系; POD活性是不育系明显高于保持系, 且呈持续增强趋势, 保持系逐渐减弱。

关键词 [辣椒](#); [细胞质雄性不育](#); [物质代谢](#); [过氧化物酶](#)

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A Study on Material Metabolism and Peroxidase in Cytoplasmic Male-sterile Lines and their Maintainer Lines of Hot Pepper

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Abstract

An investigation was made on material metabolism and the specific activity of peroxidase of the leaves and flower buds from cytoplasmic male-sterile lines (CMS) and their maintainer lines(M). The results showed that the content of sugar in the big bud was the lowest in the three stage of flower development in the CMS, while the M kept increasing; The content of protein in the small bud was the highest among the three stage of flower development in the CMS, but in the M, it was increased at all times. The content of proline in the CMS was slightly decreased, whereas the M's reflected an increasing tendency during flower development. The specific activity of peroxidase(POD) in CMS was higher than that of M with a great increase in flower development.

Key words [hot pepper](#); [cytoplasmic male-sterile](#); [material metabolism](#); [peroxidase](#)

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