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## 大豆胞囊线虫不同生理小种对大豆根内酶活力的影响

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摘要: 采用辽豆10、PI88788、PI90763, 3个品种均同时接种大豆胞囊线虫1号、3号和14号生理小种。测定了大豆胞囊线虫不同生理小种对大豆PAL、POD、PPO、SOD活力的影响, 分析不同大豆品种接种大豆胞囊线虫后保护酶活力的变化和抗性关系。结果表明: PI88788接种大豆胞囊线虫3号和14号生理小种后根系中4种酶活性显著高于对照; PI90763接种大豆胞囊线虫1号和3号生理小种后根系中4种酶活性显著高于对照。研究证实不同大豆品种对大豆胞囊线虫不同生理小种的抗病性与接种SCN不同生理小种后大豆根内PAL、POD、PPO、SOD活力的变化密切相关。

Abstract: Three soybean varieties 'Liaodou 10', 'PI88788' and 'PI90763' were inoculated with different races of Heterodera glycine (race 1, race 3, race 14) at the same time. The dynamic changes of activities of Phenylalanine Ammonia-lyase (PAL), Peroxidase (POD), Polyphenol (PPO) and Superoxide Dismutase (SOD) in roots were analyzed. Results showed that activities of the four enzymes in roots of soybean cultivars 'PI88788' colonized by H. glycine race 3 and race 14 were higher than those in control roots; activities of the four enzymes in roots of soybean cultivars 'PI90763' colonized by H. glycine race 1 and race 3 were higher than those in control roots. It is concluded that the activities of the four enzymes had closely related to resistance to different races of H. glycine.

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