

研究论文

小麦抗赤霉病性的生化研究及其机制的探讨

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摘要 本研究测定了13个抗赤霉病有明显差异的小麦品种的病小花数、超氧化物歧化酶(SOD)和苯丙氨酸解氨酶(PAL)的活性, 以及胆碱、总酚、水溶性蛋白、黄西酮和木质素的含量。结果表明: 健株的SOD活性与小麦抗赤霉病性呈极显著正相关, 与胆碱含量呈极显著负相关, 可作为小麦遗传育种中抗病性鉴定的参考指标; 接种24小时的PAL活性、72小时黄酮含量、168小时木质素含量与抗赤霉病性呈极显著的负相关, 总酚、水溶性蛋白质含量与抗赤霉病性相关不显著。

关键词 [小麦;抗赤霉病性;生化;抗性机制](#)

分类号

Studies on Biochemical Assay and Mechanism of Resistance to Scab in Wheat

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Abstract Numbers of infected florets, SOD activity, PAL activity and contents of cholin, flavone and lignin of 13 wheat varieties with different resistance to scab were tested. The results indicated that resistance to scab positively correlated with SOD activity and negatively with cholin content in uninoculated plant, those can be used as biochemical indexes identifying the resistance to scab. There were highly significant negative correlation between resistance to scab and Pal activity, contents of flavone and lignin in inoculated plant respectively, those can be used as the indexes for studying mechanism of resistance to scab. Contents of total phenol and soluble protein did not significantly correlated with the resistance to scab. SOD activity might play an important role in resistance to scab.

Key words [Wheat](#) [Resistance to scab](#) [Biochemical index](#) [Resistant mechanism](#)

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