

研究论文

IPT对稻苗根系生长和三种内源激素水平的影响

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摘要 适宜浓度(0.1 mg/L)的IPT(isoprothiolane)浸泡水稻种子24小时, 稻苗的种子根长度, 侧根数目以及芽鞘节根长度, 根系的干重均受到显著的促进。与之相对应的是, IPT处理后, 种子根的内源IAA和ABA的含量提高, 而iPAs和ZRAs的含量下降。IPT处理也增加了稻苗的根系活力, 提高了低温条件下POD(过氧化物酶)和CAT(过氧化氢酶)的活性。

关键词 [稻苗](#) [IPT](#) [植物激素](#) [根系生长](#)

分类号

Effects of IPT on the Growth of Roots and Contents of IAA, Cytokinins and ABA in Rice Seedling

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Abstract The seeds of hybrid rice cv. Shanyou 63 were soaked in IPT(isoprothiolane) solution with various concentrations (0.1~100.0 mg/L) for 24h. It was found that 0.1 mg/L IPT significantly promoted the length of seminal root and crown roots, and 0.1~100.0 mg/L IPT significantly promoted the lateral root number in seminal root. Subsequently, plant hormones contents in root were determined by enzyme-linked immunoassay assays (ELISAs). It was found that the contents of IAA and ABA increased in seminal root, whereas those of iPAs and ZRs decreased after IPT treatment. Finally, the root activities were determined, It was found that the TTC reducing capacity of roots increased obviously, Both POD and CAT activities in roots treated with IPT were higher than those of the control under low temperature.

Key words [Rice seedling](#) [IPT](#) [Plant hormones](#) [Root growth](#) [POD](#) [CAT](#)

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