

研究论文

利用花粉管通道法将叶片衰老抑制基因PSAG12-IPT导入普通小麦的研究

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摘要 利用花粉管通道法将叶片衰老抑制基因PSAG12-IPT导入普通小麦品种西农1376, 经PCR、GUS组织化学染色、点杂交和Southern杂交分析, 证明带有特异启动子的目的基因已整合到5个植株的基因组中, 且在大部分转基因植株中能够稳定遗传。通过叶片细胞分裂素含量、叶绿素含量、叶片衰老进程及农艺性状分析, 初步证明PSAG12-IPT基因在部分转基因小麦的衰老叶片中特异表达, 叶片衰老受到明显抑制。

关键词 [小麦\(Triticum aestivum\)](#) [花粉管通道法](#) [叶片衰老](#) [PSAG12-IPT](#)

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Studies on Introduction of Leaf Senescence-inhibition Gene PSAG12-IPT in to Common Wheat through Pollen-tube Pathway

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Abstract The leaf senescence-inhibition gene PSAG12-IPT was used to improve wheat varieties that had disadvantage of leaf presenility. With wheat cultivar Xinong 1376 as material, 5 transgenic plants were obtained through pollen tube pathway-mediated transformation. By means of PCR amplification, GUS histochemical analysis, Dot and Southern blot hybridization, the target gene with specific promoter was demonstrated to integrate into the wheat genome already. The PSAG12-IPT gene could inherit steadily in the most transgenic plants. The leaf cytokinin, chlorophyll, senescence development and agronomical character of transgenic plants were discussed. The results indicated that PSAG12-IPT gene might specifically express in the senescent leaf of some transgenic plants, and the leaf senescence was obviously delayed.

Key words [Wheat \(Triticum aestivum\)](#) [Pollen tube pathway](#) [Leaf senescence](#) [PSAG12-IPT](#)

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