

研究论文

1B/1R易位在小麦花药培养中作用的研究

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摘要 对1B×1B、1B×1B/1R和1B/1R×1B/1R三类杂交组合共23个F1及其15个亲本的花药培养效应进行了研究; 并对1B×1B/1R类型9个杂交组合的593个F1花粉植株进行了根尖细胞染色体鉴定。研究表明: 在1B背景下, 1B/1R易位能显著提高小麦花粉愈伤组织诱导率、绿苗分化率和绿苗诱导率, 并发现由1B×1B/1R类型杂交组合F1获得的花粉植株绝大部分为1B/1R类型, 1B/1R类型花粉植株(1对随体)和1B类型花粉植株(2对随体)的比例为4.5-14.0:1, 而不是1:1, 这表明1B/1R易位的花培效应, 主要是在1B背景下提高了具有1B/1R易位的小孢子的胚胎发生能力。同时发现1B/1R易位具有降低白苗分化率的作用, 这一作用不受1B的影响。

关键词 [小麦](#), [1B/1R易位](#), [花药培养](#), [诱导频率](#)

分类号

A Study on the Effects of 1B/1R Translocation on Anther Culture in Wheat

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Abstract Anyhrt vulyure of three types of F1 hybrids(1B 1B,1B 1B/1R,1B/1R 1B/1R)including 23 crosses,and their 15 parents Was conducted,and the chromosomes in the root tip cells of 593 pollenplants obtained from 9 1B 1B/1R crosses Were investigated cytogenetically.The results showed that 1B/1R translocation could significantly raise the induction frequency lf green plants under 1B background.Most of the pollen plants from the F1 hybrids lf 1B 1B/1R belongedto 1B/1R type,theth e ratio of 1B/1R pollen plants (having one pair of satellited chromosomes)to 1B chromosome background tend to promote microspores With 1B/1R translocation to develop into pollen embryos in the anther culture of wheat. In addition, the experi mental results also indicated that 1B/1R translocation might reduce the regeneration frequency of allbino plants,which,howe ver,seemed not to be influenced by 1B chromosome.

Key words [Wheat](#) [1B/1Rtranslocation](#) [Anther culture](#) [Induction frequency](#)

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