

# 一个1B/1R小麦-黑麦染色体易位的鉴定<sup>1)</sup>

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**摘要** 本研究对冬小麦品系73(36)9-1的1B/1R易位染色体进行了遗传分析。发现73(36)9-1有一对随体染色体, 它的两个亲本矮丰四号及洛夫林10(Lovrin 10)分别有两对和一对随体染色体。观察用矮丰四号回交的F<sub>1</sub>, 绝大部分花粉母细胞的中期染色体都能正常配对, 而用洛夫林10回交的, 除了多数产生两个单价体之外, 正常配对的情况也能经常看到。同时还发现, 73(36)9-1和“中国春”双端体(CSDT)的1BL能很好地配对并形成一种棒状的异形二价体, 而它和CSDT 1BS的染色体则主要产生20''+1'+t'的构型, 从而证明易位发生的可能途径, 推断是由于在F<sub>1</sub>花粉母细胞中的两个单价体(一个是小麦染色体1B, 一个是黑麦染色体1R)同时进行错分裂之后产生的两种端着丝点染色体(1BL和1RL)重新并合形成的, 因而冬小麦73(36)9-1可能是一个自发产生的易位系。

**关键词** [小麦](#), [黑麦](#), [随体染色体](#), [易位](#), [部分同源性](#), [端着丝点并合](#)

分类号

## Identification of 1B/1R Wheat-rye Chromosome Translocation

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### Abstract

Genetical analysis was made on 1B/1R translocation chromosome of winter wheat strain 73(36)9-1 in this study. It was found that root-tip cells of 73(36)9-1 had one pair of satellite chromosomes, and its parents, Ai-Feng No.4 and Lovrin 10 had two and one pair of satellite chromosomes respectively. It was observed that all the metaphase chromosomes of most PMGs of hybrid F<sub>1</sub>[73(36)9-1×Ai-Feng No.4] paired normally, and so did those of hybrid F<sub>1</sub>[73(36)9-1×Lovrin 10], except that two univalents were produced in most of PMC's. It was also found that the chromosomes paired well and formed a rod heteromorphic bivalent in the hybrid F<sub>1</sub>[73(36)9-1×CSDT 1BL]. Whereas 73(36)9-1 produced mainly configuration of 20''+1'+t' when test-crossed with CSDT 1BS. It showed that the translocation occurred on chromosome 1B short arm, and this segment came from rye chromosome 1RL. In the present paper we discussed also the way in which the translocation might be caused, and concluded that it was formed through reunion of two kind telocentric (1BL and 1RL) after simultaneous misdivision of two univalent chromosomes (a wheat chromosome 1B, and a rye 1R). Thus, it could be seen that winter wheat strain 73(36)9-1 is a spontaneous translocation line.

**Key words** [Wheat](#) [Rye](#) [STA-chromosomes](#) [Translocation](#) [Homoeology](#) [Telocentrics-union](#)

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