作物学报
Acta Agronomica Sinica

首页 | 期刊介绍 | 编委会 | 投稿指南 | 期刊订阅 | 下载中心 | 留 言 板 | 联系我们　　　　English

作物遗传育种·种质资源·分子遗传学　　**最新目录　| 下期目录 | 过刊浏览 | 高级检索**　　　<< Previous Articles | Next Articles >>

利用分子标记辅助选择聚合水稻抗病基因$Pi\text{-}ta$、$Pi\text{-}b$和$Stv\text{-}b^i$

王军, 杨杰, 陈志德, 范方军, 朱金燕, 杨金欢, 仲维功＊＊

江苏省农业科学院粮食作物研究所 / 国家水稻改良中心南京分中心，江苏南京210014

Pyramiding Resistance Gene $Pi\text{-}ta$, $Pi\text{-}b$, and $Stv\text{-}b^i$ by Marker-assisted Selection in Rice (*Oryza sativa* L.)

WANG Jun, YANG Jie, CHEN Zhi-De, FAN Fang-Jun, ZHU Jin-Yan, YANG Jin-Huan, ZHONG Wei-Gong＊＊

Institute of Food Crops, Jiangsu Academy of Agricultural Sciences / Nanjing Branch of Chinese National Center for Rice Improvement, Nanjing 210014, China

摘要	参考文献	相关文章

Download: PDF (283KB) 　 HTML 1KB 　 Export: BibTeX or EndNote (RIS) 　 Supporting Info

摘要 水稻稻瘟病和条纹叶枯病是长江中下游粳稻稻区两大主要病害，选育抗病品种是防治这两大病害最有效的方法。以同时含有稻瘟病抗病基因$Pi\text{-}ta$和$Pi\text{-}b$的武运粳8号，含有条纹叶枯病抗病基因$Stv\text{-}b^i$的镇稻42为基因供体配置杂交组合。利用$Pi\text{-}ta$和$Pi\text{-}b$的基因标记和$Stv\text{-}b^i$紧密连锁的分子标记对分离世代进行基因位点的检测，结合田间多代选育、抗性鉴定将3个抗病基因同时转育到高产品种中，选育出高产、优质、多抗水稻新品系74121。利用分子标记辅助选择，为选育多抗水稻新品种提供了一种简单、快捷的选择方法，同时也为水稻抗病育种提供了新的遗传资源。

关键词： 水稻　稻瘟病　条纹叶枯病　$Pi\text{-}ta$　$Pi\text{-}b$　$Stv\text{-}bi$　分子标记辅助选择

Service
- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- Email Alert
- RSS

作者相关文章
- 王军
- 杨杰
- 陈志德
- 范方军
- 朱金燕
- 杨金欢
- 仲维功

Abstract： The blast and stripe disease are two major diseases of rice in Yangtze River *japonica* cultivating area. Breeding resistant cultivars is the most effective way to prevent these two major diseases. Wuyujing 8, containing both $Pi\text{-}ta$ and $Pi\text{-}b$, was crossed with Zhendao 42 which carried rice stripe disease resistance gene $Stv\text{-}b^i$. Two gene-markers, Pita and Pib, and one SCAR marker tightly linked with $Stv\text{-}b^i$ were used for marker-assisted selection in each segregating generation. After the multi-generation breeding and identification of resistance, three resistance genes were put together finally. One new rice stable line, 74121 was obtained which conferred good agronomic characteristics containing high-yield, good quality and multi-resistance. These results indicated that marker-assisted selection could not only be a simple and effective way but also provide genetic resources for breeding new rice multi-resistant varieties.

Keywords： Rice　Blast　Stripe disease　$Pi\text{-}ta$　$Pi\text{-}b$　$Stv\text{-}b^i$　Marker-assisted selection

引用本文：

王军, 杨杰, 陈志德, 范方军, 朱金燕, 杨金欢, 仲维功. 利用分子标记辅助选择聚合水稻抗病基因$Pi\text{-}ta$、$Pi\text{-}b$和$Stv\text{-}b^i$[J]. 作物学报. 2011,V37(06): 975-981

WANG Jun, YANG Jie, CHEN Zhi-De, FAN Fang-Jun, ZHU Jin-Yan, YANG Jin-Huan, ZHONG Wei-Gong. Pyramiding Resistance Gene $Pi\text{-}ta$, $Pi\text{-}b$, and $Stv\text{-}b^i$ by Marker-assisted Selection in Rice (*Oryza sativa* L.)[J]. Acta Agron Sin, 2011,V37(06): 975-981

链接本文：

http://211.155.251.148:8080/zwxb/CN/10.3724/SP.J.1006.2011.00975　　**或**　　http://211.155.251.148:8080/zwxb/CN/Y2011/V37/I06/975