

Breeding Rice Restorer Lines with High Resistance to Bacterial Blight by Using Molecular Marker-Assisted Selection [PDF]

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摘要: Two bacterial blight (BB) resistance genes, Xa21 and Xa4, from IRBB24 were introduced into hybrid rice restorer line Mianhui 725, which is highly susceptible to BB, by using hybridization and molecular marker-assisted selection technology. Four homologous restorer lines were obtained through testing the R target genes with molecular markers and analyzing parental genetic background. Inoculation of the four lines and their hybrids with the specific strains of Xanthomonas oryzae pv. oryzae, P1, P6 and seven representative strains of Chinese pathotype, CI-CVII, showed that all of the four lines and their hybrids were highly resistant and presented broad resistance-spectrum to BB. The hybrids of G46A / R207-2 displayed good agronomic characters and high yield potential, and R207-2 was named Shuhui 207.

关键词: bacterial blight; resistance; gene pyramiding; hybrid rice; restorer line; molecular marker-assisted
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