

NHẬN DẠNG CÁC GEN KHÁNG BỆNH ĐẠO ÔN Ở MỘT SỐ TỈNH BẮC MIỀN TRUNG BẰNG CÁC DÒNG LÚA CHỈ THỊ ĐƠN GEN KHÁNG

Identification of Rice Blast Resistance Genes in North Central Coast of Vietnam Using Monogenic Lines

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Abstract

In the present study, the authors studied the interaction between 26 monogenic differentials carrying 26 blast resistance genes with *Pyricularia oryzae* in field and house net conditions. In field condition, the result showed that area under disease progress curves (AUDPC) of monogenic lines was found to range from 0 to 361.8. Lijiangxintuanheigu (LTH) was susceptible in all of regions. The monogenic lines carrying *Pik*, *Pik-p*, *Pik-h*, *Piz*, *Pi1*, *Pi7(t)* and *Pik-m* were highly resistant to blast in all of regions. In plastic house net conditions, the percentage of virulent reactions of monogenic lines to 15 isolates was found to range from 23.1 to 76.9%. LTH was susceptible to all 15 isolates. All 26 monogenic lines were resistant to at least 4 isolates of *P.oryzae*, and the frequency of resistant reactions of the monogenic lines carrying *Pi1*, *Pik*, *Piz*, *Pi7(t)*, *Pik-p*, *Pik-m*, *Pi4(t)*, *Pi9* and *Pita* were 100, 93.3, 93.3, 86.7, 86.7, 86.7, 80.0, 80.0, and 80.0%, respectively. These findings show that *Pi1*, *Pik*, *Piz*, *Pi7(t)*, *Pik-p*, *Pik-m*, *Pi4(t)*, *Pi9* and *Pita* may be important *R* genes for preventing rice blast disease in North Central Vietnam. Based on the result, a useful strategy for managing rice blast disease by stacking pyramiding blast *R* genes against pathogenic *P.oryzae* isolates at hotspot in North Central Coast of Vietnam was proposed.

Keywords: Rice, *Pyricularia oryzae*, monogenic lines, resistance genes

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1. Khoa Nông học, trường Đại học Nông lâm Huế
 2. Khoa Khuyến nông và phát triển nông thôn, Đại học Nông lâm Huế
 3. Chi cục trồng trọt và bảo vệ thực vật Nghệ An