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Evaluation of pathogenicity and race classification of *Xanthomonas oryzae* pv. *oryzae* in guilan province-I ran

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ABSTRACT

To evaluation of pathogenicity and race classification of *Xanthomonas oryzae* pv. *oryzae* agent bacterial leaf blight of rice, 153 isolates of *X. oryzae* pv. *oryzae* were collected from different rice-growing cities of Guilan province – Iran. All of isolates were inoculated to assess the differential characteristics of 26 near isogenic rice lines containing a single resistance gene or two to five genes. Inoculation was done 21 days after sowing in the greenhouse. Scoring of inoculated plants was done 18 days after inoculation. The level of infection was not so clear among pyramiding lines, expect IRBB53 and IRBB61. Therefore, the pyramiding lines can not be used as differentials for pathogenicity evaluation of *X. oryzae* pv. *oryzae* The 12 rice lines with a single resistance gene were used further to establish a system of races classification of *X. oryzae* pv. *oryzae* IRBB14, IRBB21 and IRBB7 were resistance to the most isolates. Whereas, IRBB1, IRBB2, IRBB4 and IRBB10 were susceptible to all isolates. Based on the interactions between the isolates *X. oryzae* pv. *oryzae* and the 12 near-isogenic rice lines, seven single gene rice lines were chosen as differentials, and the 153 tested isolates were classified into four races. Except for cultivar types, different terrain, climate, period of rice planting and other factors may be associated with the population diversity and virulent variation of *X. oryzae* pv. *oryzae*.

KEYWORDS

 Bacterial Blight; Near-Isogenic Lines; Pyramiding Lines; Race Classification; Rice; *Xanthomonas oryzae* pv. *oryzae*

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