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Responses of Rice Genotypes Carrying Different Dwarf Genes to *Fusarium moniliforme* and Gibberellic Acid

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Abstract: A total of 32 rice genotypes carrying different dwarf or semi-dwarf genes were inoculated with the fungus *Fusarium moniliforme* Sheldon or treated with 50 mg l^{-1} GA_3 in order to select resources resistant to rice bakanae disease from the dwarf materials. The length of the elongated seedlings was measured, and the percentage of death of the seedlings after transplanting to field was also counted. A significant correlation was found between the length of the seedling treated with GA_3 and disease injury by bakanae fungus. Rice materials carrying dwarf gene such as *sd1* were not only sensitivity to GA_3 but also susceptive to rice bakanae disease. Materials carrying dwarf gene *d1* were insensitive to GA_3 but susceptive to bakanae. On the other hand, all materials carrying *d29*, *sd6* or *sdq*(t) genes showed resistance to bakanae. The present study indicated that dwarf and semi-dwarf rice materials might be useful resources for improvement of bakanae resistance in rice breeding programs.

Keywords: Bakanae disease, Dwarf gene, Gibberellic acid, *Oryza sativa* L., Rice, *Sd1*

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