

Reaction of Resistant and Susceptible Rice Genotypes Against Brown Planthopper (*Nilaparvata lugens*)

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The study was carried out to assess the reaction of different rice genotypes in response to brown planthopper (BPH) *Nilaparvata lugens* (Stål.) attack and the possible use of these genotypes in BPH management. The resistant genotypes PTB 33, ADT 45 and ASD 7 and the moderately resistant genotypes CO 43 and KAU 1661 recorded the lowest nymphal preference, fecundity, feeding rate, survival, growth index, population buildup and plant dry weight loss per mg of insect dry weight produced, and more unhatched eggs, longer nymphal development period, days to wilt and higher Functional Plant Loss Index compared with the susceptible genotype TN1. In resistant and moderately resistant genotypes, a greater accumulation of defense enzymes such as peroxidase and polyphenol oxidase in response to *N. lugens* infestation was recorded one day after infestation, and more pathogenesis-related protein and chitinase activity was noted 3 days after infestation. The activity was sustained for more than a week after infestation compared with the susceptible genotype TN1.

KEY WORDS: Defense enzymes; genotypes; *Nilaparvata lugens*; pathogenesis-related proteins; resistant; susceptible.

Received Aug. 18, 2006; accepted Jan. 21, 2007; <http://www.phytoparasitica.org> posting July 30, 2007.

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