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Pathogenicity of Entomopathogenic Fungi as Bioinsecticides for Controlling Green Leaf Hoppers(*Nephotettix virescens*)

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Abstract : Green leaf hoppers(*Nephotettix virescens*) is the main vector of tungro causing virus. Integrated tungro disease control can involve several components at once including the use of entomopathogenic fungi such as *Metarhizium anisopliae* and *Beauveria bassiana*. The purpose of this study was to determine the potential use of *M. anisopliae* and *B. bassiana* fungi on mortality and time of death of green leaf hoppers as a tungro disease vector. This study used four concentrations of conidia, namely 10^7 (A1), 10^8 (A2), 10^9 (A3) and 10^{10} (A4) for *M. anisopliae* and 10^6 (B1), 10^7 (B2), 10^8 (B3) and 10^9 (B4) for *B. bassiana*. The method of application uses three methods: 1) method of insect spray, 2) method of plant spray and 3) method of insect spray on plants. Parameters observed were mortality and time of death at 12, 24,48 and 72 hours after application. Differences in mortality of green leafhopper at several conidia concentrations, and without treatment (control) were tested with the chi-square model while LT50 with probit analysis. The results showed that the mortality of green leafhopper with *M. anisopliae* (A4) treatment on insect spray method (76.7%), plant spray (50.0%) and insect spray on plants (86.7%), while with treatment *B. bassiana* (B4), mortality in insect spray method (86.7%), plant spray (53.3%) and insect spray method in plants (93.3%) at 72 hours after application. The LT50 value was found in treatment A4 (24.6 hours) and B4 (18.2 hours).

Keywords : Mortality, *Metarhizium anisopliae*, *Beauveria bassiana*, tungro disease.

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