Effectiveness of Secondary Metabolites from Entomopathogenic Fungi for Control Nilaparvata lugens StÃƒÂ¥l. in the Laboratory Scale

Title	Effectiveness of Secondary Metabolites from Entomopathogenic Fungi for Control Nilaparvata lugens StÃƒÂ¥l. in the Laboratory Scale
Author Order	1 of 4
Accreditation	2
Abstract	Nilaparvata lugens StÃƒÂ¥l. is an essential pest in rice plants. This pest attack can reduce crop yields and even crop failure. This research was conducted to obtain secondary metabolites that are effective in controlling brown planthopper (BPH). A randomized block design was used to test the effectiveness of secondary metabolites against BPH. The treatments tested were secondary metabolites produced by eight isolates of fungi consist of three concentrations: 5, 10, and 15%. Water and imidacloprid insecticide were used as control. The eight isolates were: J11 (Aspergillus sp.), J22 (Lecanicillium saksenae), J34 (Myrothecium sp.), J35 (Beauveria sp.), J41 (Fusarium sp.), J56 (Fusarium sp), J60 (Simplicillium sp.), and J65 (CurvulariaÃ‚Â sp.). Each treatment was repeated three times. The variables observed were mortality and time of death of BPH. Data were analyzed using the F test and followed by a DMRT if significant differences existed. The results showed that the secondary metabolites of the Lecanicillium saksenae,Ã‚Â Myrothecium sp., and Simplicillium sp. fungi effectively controlled BPH pests by 80Ã¢Â€Â’100% within 3.22Ã¢Â€Â’5.47 days. The fungus L. saksenae, Myrothecium sp., and Simplicillium sp. contain insecticidal compounds, clogging the insect spiraculum, antifeedant, repellant, and antimicrobial.
Publisher Name	Universitas Gadjah Mada
Publish Date	2021-07-31
Publish Year	2021
Doi	DOI: 10.22146/jpti.62116
Citation	
Source	Jurnal Perlindungan Tanaman Indonesia
Source Issue	Vol 25, No 1 (2021)
Source Page	86Ã¢Â€Â’97
Url	https://jurnal.ugm.ac.id/jpti/article/downloadSuppFile/62116/14470
Author	Dr Ir ENDANG WARIH MINARNI, M.P.