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NARUMOL SUPAWANANUSORN : USE OF FUNGI FOR BIOLOGICAL CONTROL OF RICE BROWN PLANTHOPPER *Nilaparvata lugens* (Stal). THESIS ADVISOR : ASSO. PROF. ARUNI CHANTARASNIT, Ph.D. 75 pp. ISBN 974-635-464-7

Fifteen genera of fungi were isolated from diseased brown planthopper collected at Pathum Thani Rice Research Center. Of these , fungi which were often found and/or those reported to be entomopathogenic fungi were tested for insect pathogenicity in the laboratory. The results showed that one isolate of *Metarhizium flavoviride* and another isolate of *Paecilomyces fumosoroseus* were highly significant in insect accumulative mortality rate. In the larger experimental unit-scale in insect pathogenicity test, only *P.fumosoroseus* showed promising trend to control brown planthopper 7 days after fungal application.

Fungal growth and sporulation studies of the three strains of *M. flavoviride* , *P. fumosoroseus* and *V. lecanii* were compared in three different media namely potato sucrose agar (PSA), potato sucrose agar added peptone 1% (PSA+P) and Sabouraud sucrose agar (SSA). The results showed that mycelial growth of all three isalates of *M. flavoviride* were accelerated in peptone-added medium (PSA+P and SSA) with no effect on sporulation. No significant difference of growth rate and sporulation were observed in *P.fumosoroseus* and *V.lecanii.*

ภาควิชา -	ลายมือชื่อนิสิต นฤมล สุภวนานุสรณ์
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