

**THE EFFECT OF ADDING NEEM OIL (*Azadirachta indica*) TO
Metarhizium anisopliae IN VARIOUS TYPES OF MANURE ON
MORTALITY AND FEEDING ABILITY OF WHITE GRUB *Lepidiota
stigma***

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ABSTRACT

Lepidiota stigma is the main pest in sugar cane plantations. The addition of neem oil and manure to the application of *Metarhizium anisopliae* is expected to increase mortality and reduce the feeding ability of *L. stigma*. This study aims to determine the most effective concentration of neem oil and type of manure in the application of *M. anisopliae* on *L. stigma* mortality. This research was carried out at the Plant Protection Laboratory of UPN "Veteran" Yogyakarta. The research method used a 2-factor Completely Randomized Design (CRD) with 3 repetitions. The first factor is the concentration of neem oil to *M. anisopliae*, namely without neem oil, 5% neem oil, and 10% neem oil. The second factor is the type of manure, namely without manure, goat manure, cow manure, and chicken manure. The observation data was analyzed using Analysis of Variance (ANOVA), if there were significant differences, it was continued with Duncan's Multiple Range Test (DMRT) with a significance level of 5%. The results of the study showed that there was no interaction on mortality and feeding ability of white grub in the combination treatment of neem oil concentration and type of manure. 5% neem oil treatment was able to increase mortality of *L. stigma*. Manure treatment was equally good in reducing the feeding ability of *L. stigma*.

Keyword: White grub, *Lepidiota stigma*, *Metarhizium anisopliae*, Manure, Neem oil.