

Eksplorasi, Identifikasi, dan Bioesai Jamur Entomopatogen terhadap Spodoptera frugiperda dari Kabupaten Purbalingga

Title	Eksplorasi, Identifikasi, dan Bioesai Jamur Entomopatogen terhadap Spodoptera frugiperda dari Kabupaten Purbalingga
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Abstract	<p>The goals of this study were to explore and identify entomopathogenic fungi, as well as determine the most effective application techniques to control <i>S. frugiperda</i> from exploration of infected <i>Spodoptera frugiperda</i> larvae in Purbalingga Regency. The research was carried out at the Plant Protection Laboratory, Faculty of Agriculture, Jenderal Soedirman University, from January to May 2022. Samples were collected by purposive random method. The study used a Complete Randomized Design, consisting of two factors, namely the type of entomopathogenic fungus and the application technique, with 9 combinations and 3 replications. Observed variables include mortality, feeding activity, growth, and reproduction of larvae. The results showed that (1) the results of exploration of entomopathogenic fungi were from the genus <i>Metarhizium</i> sp. and <i>Penicillium</i> sp. (2) single treatment of <i>Metarhizium</i> sp. is more effective than <i>Penicillium</i> sp. in killing <i>S. frugiperda</i> larvae. Fungi <i>Metarhizium</i> sp. and <i>Penicillium</i> sp. decreased feeding activity, length of three-instar larval period, and number of eggs, respectively 24.99 and 15.99%, 4.71 and 2.46%, 9.18 and 8.04% against controls. (3) single treatment of feed soaking method decreased mortality by 55.18% than other methods. Spraying the larval body decreased mortality by 44.84% compared to other methods. The method of application did not affect the feeding, growth and fecundity activity of larvae. (4) The combined treatment of <i>Metarhizium</i> sp., spraying the larval body, and soaking feed had a mortality percentage of 60%. Interaction treatment of the fungus <i>Metarhizium</i> sp. and the method of application lowered the feed power by 16%. The decrease in the period of three instar larvae to pupae and the largest number of eggs in the combination treatment of <i>Metarhizium</i> sp. and spraying of larval bodies was 6.34% and 11.20% respectively compared to controls. Keywords: bioassay, entomopathogenic fungi, <i>Spodoptera frugiperda</i>, Purbalingga</p>
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