

Uji Efektivitas Metabolit Sekunder Jamur *Simplicillium* sp. terhadap *Spodoptera frugiperda* J.E. Smith di Laboratorium

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| Abstract | <p>This research aims to determine the effect of the secondary metabolites of the fungi <i>Simplicillium</i> sp. on mortality, larval feeding capacity, larval growth, percentage of pupae and imagos, fecundity and fertility, secondary metabolites of the fungi <i>Simplicillium</i> sp. which effectively kills <i>Spodoptera frugiperda</i>. This research was conducted in the Plant Protection Laboratory of Agriculture Faculty, Jenderal Soedirman University, Purwokerto from October 2020 until January 2021. The method used in this research was a factorial randomized block (RBD) with two factors. The first factor is the concentration of secondary metabolite of the fungi <i>Simplicillium</i> sp. consisting of control (K0), 10% concentration (K1), 20% concentration (K2), 30% concentration (K3); and a synthetic insecticide with an active ingredient Emmamectin benzoate and Lufenuron 1 ml/l (K4). The second factor is the application method which consists of the spraying method on the larvae (A1) and the feed immersion method (A2). The observed parameters were mortality, feeding capacity, growth time, percentage of pupae and imagos formed, fecundity and fertility, and effective concentration. The result showed that: 1) secondary metabolite of the fungi <i>Simplicillium</i> sp. with a concentration of 20 percent larvae spraying method caused larvae mortality by 36.67 percent and the food immersion method caused larvae mortality by 45.00 percent, and decreased feeding activity by 26.12 percent; 2) secondary metabolite of the fungi <i>Simplicillium</i> with a concentration of 20 percent was able to inhibit the growth of larvae by 3.83 percent, pupae by 5.40 percent and imagos by 14.19 percent, reduced the number of pupae and imagos formed by 49.17 percent and 37.33 percent, and reduced fertility at a concentration of 10 percent by 11.30 percent; 3) secondary metabolite of the fungi <i>Simplicillium</i> sp. has not been effectively used as a control for <i>S. frugiperda</i> since it has an efficacy value of less than 80 percent.</p> |
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