

## COMPATIBILITY OF INSECTICIDES WITH ENTOMOPATHOGENIC FUNGI Beauveria bassiana AND Metarhizium anisopliae

<b>Title</b>	COMPATIBILITY OF INSECTICIDES WITH ENTOMOPATHOGENIC FUNGI Beauveria bassiana AND Metarhizium anisopliae
<b>Author Order</b>	3 of 3
<b>Accreditation</b>	
<b>Abstract</b>	<p>Insecticide use has produced negative impact by affecting the non-target predatory organisms in nature, one of which is the entomopathogenic fungi, Beauveria bassiana and Metarhizium anisopliae. Interactions occur, however, between insecticides and the entomopathogens. The combination of insecticides at a low dose and an entomopathogenic fungus can work synergistically to increase pest insect mortality. This combination is particularly advantageous because it decreases the insecticide dose applied, reduces environmental contamination, and decreases pest resistance. The study purpose was to determine the compatible working insecticide dose and the entomopathogenic fungi B. basiana and M. anisopliae. The experimental design applied completely randomized design consisting of 15 treatments and four replicates. There were five types of insecticides with three different doses each (0.5 <math>\times</math> DF, 1 <math>\times</math> DF, and 2 <math>\times</math> DF), whereas the fungal isolates included B. basiana and M. anisopliae. The parameters observed were the germination percentage of conidia, the percentage of inhibition, and the number of conidia.ml<sup>-1</sup>. Data were analyzed using ANOVA (5% error rate). The mean values were analyzed by DMRT <math>p &lt; 0.05</math>. Deltamethrin 0.5 <math>\times</math> DF, and imidacloprid 0.5 <math>\times</math> DF demonstrated the highest conidial germination in B. basiana and M. anisopli, respectively. Insecticides showing the highest vegetative growth on B. basiana and M. anisopliae at 7 DAI was imidacloprid 0.5 <math>\times</math> DF, while at 14 DAI was imidacloprid 0.5 <math>\times</math> DF and chlorphyrifos 2 <math>\times</math> DF, respectively. The highest conidial production of the fungi was triggered by imidacloprid 0.5 <math>\times</math> DF. Based on compatibility calculation, imidacloprid 0,5 <math>\times</math> DF worked with B. basiana (BI: 67.77) and M. anisopliae (BI: 67.16).</p>
<b>Publisher Name</b>	Fakultas Biologi   Universitas Jenderal Soedirman
<b>Publish Date</b>	2017-12-01
<b>Publish Year</b>	2017
<b>Doi</b>	DOI: 10.20884/1.sb.2017.4.4.695
<b>Citation</b>	1
<b>Source</b>	Scripta Biologica
<b>Source Issue</b>	Vol 4, No 4 (2017)
<b>Source Page</b>	273–279
<b>Url</b>	<a href="https://journal.bio.unsoed.ac.id/index.php/scribio/article/view/695/pdf">https://journal.bio.unsoed.ac.id/index.php/scribio/article/view/695/pdf</a>
<b>Author</b>	Dr Dra NUNIEK INA RATNANINGTYAS, M.S