

CROSS APPLICATION OF ENTOMOPATHOGENIC FUNGI RAW SECONDARY METABOLITES FOR CONTROLLING FUSARIUM WILT OF CHILI SEEDLINGS

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Abstract	<p>Cross application of entomopathogenic fungi raw secondary metabolites for controlling fusarium wilt of chili seedlings. Thereseearch aimed to determine the effect of entomopathogenic fungi raw secondary metabolites on fusarium wilt on chili plants and on growth of chili. In vitro test used a Completely Randomized Design with 5 treatments and 5 replicate and in planta using a Randomized Block Design with 5 treatments and 5 replicatie including control, secondary metabolites of <i>Beauveria bassiana</i> B10, <i>B. bassiana</i> B16, <i>Metarhizium anisopliae</i> M16, dan <i>Lecanicillium lecanii</i> L16. Variables observed included inhibition ability, incubation period, desease intensity, plant height, root length, and phenolic compounds (tannins, saponin, and hydroquinone) content qualitatively. The results showed that secondary metabolites of <i>B. bassiana</i> B10, <i>B. bassiana</i> B16, <i>M. anisopliae</i> M16, and <i>L. lecanii</i> L16 were able to inhibit growth of <i>Fusarium oxysporum</i> f.sp. <i>capsici</i> by 50.62; 50,64; 48,62; 56.62%, respectively, extend incubation periods of 71.05; 73,38; 64.89; and 68.57%, respectively, suppress disease intensity by 99.99; 99.99; 99.99; and 99.99%, respectively, can increase plant height by 15.22; 18.8; 21.14; 21.69%, respectively, increasing the root length by 22.61; 25,71; 26,34; 33.50%, respectively, and can increase the content of tannins, saponins and hydroquinone compounds qualitatively compared to controls. The secondary metabolites of enthomopathogenic fungi could be used as organic control for soilborne pathogenic fungi.</p>
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