APPLICATION OF RAW SECONDARY METABOLITES FROM FOUR ENTOMOPATHOGENIC FUNGI AGAINST CHILLI DISEASE CAUSED BY VIRUSES

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Abstract	Application of raw secondary metabolites from four entomopathogenic fungi against chilli disease caused by viruses. The purpose of this research was to investigate several kinds of raw secondary metabolits to decrease viral disease in chilli and inspect their side effect to plant growth. This research was conducted at experimental farm, Faculty of Agriculture, Jenderal Soedirman University from November 2018 to March 2019. The chilli seeds used for indicator plant were obtained from virus-symptomatic chilli. The raw secondary metabolites was collected from four microbial isolates used in this study, i.e. Metarhizium anisopliae, Beauveria bassiana (Papua isolate), Lecanicillium lecanii and B. bassiana Bio B10 (Jember isolate). The experiment was arranged in completely randomized design with five replications. Observation was performed on incubation period, disease intensity, AUDPC, germination percentage, plant height, number of leaves, and number of shoots. The result showed that raw secondary metabolites obtained from M. anisopliae gave the best capability to suppress disease development. Application of M. anisopliae raw secondary metabolites reduced incubation period, viral disease intensity as well as AUDPC in 34.22; 77.98 and 79.49%, respectively. The raw secondary metabolites of L. lecanii could increase percentage of germination, plant height, number of leaves, and number of shoots as 100; 38.96; 38.96 and 52.38%, respectively, compared to control.
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