Evaluation of Effervescent Tablet Formulation of *Trichoderma harzianum* Raw Secondary Metabolites Toward Fusarium Wilt on Pepper

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Abstract	Fusarium oxysporum f.sp capsici, which causes chili-fusarium wilt disease, may be regulated by a secondary metabolite of Trichoderma harzainum. Effervescent tablets are used because liquid formulations have some drawbacks. The purpose of this study is to qualitatively determine T. harzianum's best crude secondary metabolites, growth and yield, and phenolic compound content in chili crops in foamed tablet formulations against F. oxysporum in vitro. The in vitro study used 6 replicates, a completely randomized design, and 4 treatments consisted of controls and 4, 6, and 8 tablets. Under in vivo conditions, the experiment used a randomized block designs with 4 replicates, eight treatments consisting of controls, fungicides (benomyl), and four, six, or eight tablets per day before or after inoculation. The variables observed were antagonist testing, incubation time, disease intensity, disease incidence, AUDPC, germination rate, plant height, root fresh weight, and qualitative phenolic composition. The results of the study showed that the best dose of T. harzianum's crude secondary metabolite in vitro was 4 tablets. Medications in in-plant studies delayed the incubation period by 64.11%, suppressed disease outbreaks by 58.34%, reduced disease intensity by 80.45%, increased plant height by 50.4%, and harvested phenols (saponins, tannins, hydroquinone). The content of the compound has been qualitatively increased.
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