



ORIGINAL ARTICLE

INDUCING OF SYSTEMIC RESISTANCE IN CUCUMBER AGAINST *PYTHIUM. APHANIDERMATUM*, WHICH CAUSES DAMPING OFF AND ROOT ROT DISEASE

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Abstract: This study aimed to evaluate the efficiency of biological applications (*Glomas mossa*, *Trichoderma harzianum*, *Trichoderma viride* and *Azotobacter chroococcum*) in resisting Damping off and root rot disease. The application of all biological factors has significantly increased the germination percentage of cucumber seeds and decreased the disease severity percentage compared with *Pythium aphanidermatum* treatment only and a significant increase in the wet weight and dry weight of shoots and root system of the plant. The bacteria *A. chroococcum* was the most influential in the study, reaching (76.7%, 73.67% 2.067g and 1.600g), respectively. Moreover, the same factors also achieved a significant increase of lignin concentration in leaves. Increase in the concentration of polyphenol oxidase and total protein in the plant reached (15.64 mlg. gm dry weight, 3.110 units. gm. 205.5 micrograms), respectively compared to the control treatment which applied with the fungus Pathogen.

Key words: Cucumber, Randomized complete block designs (RCBD), Polyphenol oxidase (PPO), Root rot disease.

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