



**A DISEASE OF *Cucumis sativus* L. (Gherkin): IDENTIFICATION  
AND CONTROL OF THE CAUSAL ORGANISM (in vitro)**

**BY**

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## ABSTRACT

Gherkin (*Cucumis sativus L.*) is most popular vegetable, *Cucumis sativus L.* was recently found to have an unidentified disease while being grown in a protected area in the Gampaha district. The disease caused elder plants to yellow as one of its symptoms. The lowest leaves of infected plants get yellow and dry, and they quickly wilt. In the early stages of the disease, the roots are unharmed, and the leaves transform from pale green to golden yellow. With the goal of identifying the new disease affecting *Cucumis sativus L.* this study compared the effectiveness of a few selected bio pesticides and synthetic pesticides in addition to identified the cause organisms, management strategies, and techniques for its prevention. Three pathogen types were isolated and they were identified as *Aspergillus niger sp.* (pathogen type one), *Didymella spp.* (pathogen type two) and one bacteria spp. (pathogen type three). Three synthetic fungicides (Homail, Daconil, folicur) and three biological control agent (*Trichoderma viride*, *Trichoderma harzianum* and *Pseudomonas fluorescens*) were tested in vitro against the causal organisms. T5 (*Pseudomonas fluorescens* + *Trichoderma harzianum*) and T9 (Foliar), T11 (Homail) were most effective in controlling pathogen type one and T2 (*Trichoderma viride*), T5 (*Pseudomonas fluorescens* + *Trichoderma harzianum*), T8(*Trichoderma viride* + *Pseudomonas fluorescens* + *Trichoderma harzianum*) and T9(Foliar), T10 (Dacon) and T11( Homail) were the best treatments in controlling pathogen type two.

Keywords: *Aspergillus niger*, *Cucumis sativus L.*, *Didymella spp.*, *Trichoderma viride*, *Pseudomonas fluorescens*, *Trichoderma harzianum*

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