

**Efficiency of Clove oil against casuals of seedling damping – off *Pythium aphanidermatum*
(Edson) Fitzpatrick on cucumber**

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ABSTRACT

This study was carried out to : (1) evaluate effectively of clove tree oil (*Eugenia caryophyllata* Thunb) against the growth of *Pythium aphanidermatum* *In Vitro* . (2) Determine the effective extract concentration on seedling damping - off caused by pathogen on cucumber *In Vivo* , and (3) Identify the active component (s) of the effective Clove oil.

The results showed that Clove oil extracted by steam distillation at 250 , 500 and 1000 ppm inhibited the growth of *P. aphanidermatum* by 33.3 , 100 and 100%.

Thin layer chromatographic analysis of the clove oil revealed that Eugenol was the active component against the pathogen . As consequence artificially contaminated soils , drenched with clove oil at 2000 ppm was significantly reduced the damping - off on cucumber by both pathogens .