

- Document Type** : Thesis
- Document Title** : *Effect of Leaf and Seed Extracts of Neem (Azadirachta Indica .A. Juss) on The Growth and Pathogenicity of Some Plant Pathogenic Fungi*
تأثير مستخلصات أوراق وبذور النيم على النمو والقدرة الإيمراضية لبعض الفطريات الممرضة للنبات
- Document Language** : Arabic
- Abstract** : Three lab experiments were conducted in the Dep. of Arid land Agric., Faculty of meteorology, Environment and Arid Land Culture, King Abdulaziz Univ. to study the linear growth, spore germination and pathogenicity of some plant pathogenic fungi under for the first second experimental the effect of aqueous and ethanolic extracts of the neem leaves and seeds. The aqueous and ethanolic extracts at the concentrations 1:1, 1:10, 1:100 and 1:1000 were studied on the linear growth and spore germination of *Alternaria alternate*, *Pythium aphanidermatum*, *Helminthosporium spp.*, *Fusarium oxysporium*, *Bipolaris sorokiniana* and *Thilaeviopsis sp.* The effect of the extracts at the ratio 1:1 were also studied on the pathogenicity of *P. aphanidermatum*, causing damping off on cucumber seedlings from 8-48 hrs. The main results for the first experiment revealed that the ethanolic extract of the neem seeds had the best effect followed by the ethanolic leaf extract then the aqueous seed extract on the linear growth of the following fungi: *Alternaria alternate*, *Pythium aphanidermatum*, *Helminthosporium spp.* and *Bipolaris sorokiniana*. On the other hand better suppression of the growth of *Thilaeviopsis sp* was obtained when the aqueous seed extract was used compared to either the ethanolic seed or leaf extracts. Linear growth *Fusarium oxysporium*, however, was not significantly affected by any of the tested extracts. No effect was detected of the aqueous leaf extract on any tested fungus in this experiment. In the second Experimental when the three extracts were tested on the germination of the selected fungi, the aqueous followed by the ethanolic seed extract showed the best results on *Alternaria alternate*, *Pythium aphanidermatum*, *Helminthosporium spp.*, *Fusarium oxysporium* The least effect was determined when the ethanolic leaf extract was used on the germination of fungal spores. Spore germination of *Thilaeviopsis sp* was mostly affected by the ethanolic leaf extract followed by the aqueous seed extract and the least effective was the ethanolic seed extract. *Bipolaris sorokiniana* spore germination was not affected significantly by any of the tested extracts. The results of the effect of concentration revealed the concentration (1 : 1) gave the best effect for growth and spore generation of different fungi. following the other concentration. In the third experiment, pathogenicity of the fungus *P. aphanidermatum* was mostly affected by the aqueous followed by the ethanolic seed extracts then the ethanolic leaf extract where 42.66, 43.7 and 52.86% of the cucumber seedlings were infected by the pathogen as compared to % of the control seedlings. Concerning seedling infection through time it was of ovious that the infection rate incnaus through time from 8 h (0%) to 48 h (81.33%).
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- Publishing Year** : 2007