

Evaluation of some plant extract against the growth of *Alternaria alternata* as one of the causal agent of leaf spots disease of Date Palm *Phoenix dactylifera* L.

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Summary

The present study has been conducted at the laboratory of Date palm Research Center –University of Basrah to evaluate the efficiency of different plant extracts which were *Conocarpus lancifolius* (Damass) , *Ricinus communis* (Castor beans), *Nerium oleandra* (Nerium), *Clerodendron inerme* (Blue jasmine) to control the fungus *Alternaria alternata* the causal agent of leaf spots of Date Palm (*Phoenix dactylifera*) were as follows; *In vitro* and *in vivo*. In *in vitro* study; the leaf extract of *C. lancifolius* reported the highest average of reduction for mycelial growth which were 71.11, 72.22 and 78.88% at the concentration of 5, 10 and 15% respectively. Regarding the treatment of *R. communis* 10 and 15% concentrations the inhibition percentages were 72 and 74.44% respectively. Field trial revealed highest reduction of disease severity was found at the treatment of *C. lancifolius* extract at 5, 10 and 15% which were 34.17, 25.67 and 14.3% respectively, compared to infected control which was 65.16%. All treatments with plant extracts significantly reduced the disease severity of leaf spots compared to infected control treatment under field conditions.

Key word: Evaluation efficacy , Fungi , Plant extract , Date palm , *Alternaria alternata*.