



Efficacy of some medicinal plants extract to improve cumin wilt resistance caused by *Fusarium oxysporum* f. sp. Cumini

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Abstract : Cumin (*Cuminum cyminum* L.) is an annual plant known for its pharmaceutical and medicinal importance. Cumin wilt is a serious problem due to the susceptibility of the crop to *Fusarium oxysporum* f. sp. cumini resulting in severe crop losses to growers. The present study was undertaken to evaluate the possibility of using natural plant extracts for combating the negative effect of *Fusarium oxysporum* on growth of cumin. Results clearly indicated that soaking cumin seeds in *Plectranthus amboinicus* aqueous extract at the concentration of 5% prior to sowing in *Fusarium oxysporum* infested soil enhanced growth of cumin plants in terms of plant height, number of branches and umbels, plant fresh weight and seed yield/plant as compared to the other treatments. The extracts of all tested plants showed higher *in vitro* antifungal activity against *Fusarium oxysporum* f. sp. cumini, where 100% inhibition of mycelial growth of *Fusarium oxysporum* f. sp. cumini was recorded with 20% aqueous extracts of all plants under study. Highest antifungal effect was accompanied with high phenols, flavonoids, alkaloids and antioxidants content.

Keywords : *Cuminum cyminum*-*Fusarium oxysporum*-*In vitro*- Extracts- Phenols, Flavonoids, Alkaloids-Antioxidants.

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