

Antifungal activity of allelopathic plant extracts
V: inhibition in biomass production of *Fusarium solani* –
by aqueous extracts of allelopathic grasses

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Abstract

Exploiting allelopathic activity of higher plant extracts for controlling pathogenic fungi is relatively a younger area of research. An experiment was designed to evaluate the allelopathic potential of three allelopathic grasses viz., *Cenchrus pennisetiformis* Hochest, *Dicanthium annulatum* Stapf. and *Imperata cylindrica* (L). Beauv., for their use in fungal control. Aqueous root and shoot extracts of 15, 30, 45 and 60% (w/v) of the three test allelopathic grasses exhibited variable potential in reducing *in vitro* mycelial growth of the test fungal species *Fusarium solani*. A significant reduction in the biomass of test fungal species was recorded due to 30-60% shoot and root extract of *I. cylindrica* and *C. pennisetiformis*, respectively. Similarly 15% both shoot and root extracts of *D. annulatum* also suppressed significantly the biomass of the test fungal species. By contrast higher concentrations of 45 and 60% of shoot extract of *C. pennisetiformis*, 30-60% root extract of *D.annulatum* and lower concentration of 15% root extract of *I. cylindrica* significantly enhanced mycelial biomass of *F. solani*.

Key words: Allelopathic grasses, *Cenchrus pennisetiformis*, *Dicanthium annulatum*, *Imperata cylindrica*, *Fusarium solani*.