

PRELIMINARY STUDY ON ALLELOPATHIC EFFECTS ON  
Eucalyptus camaldulensis THROUGH SOIL, LITTER AND LEAF LEACHATE  
ON MUNG BEAN (Vigna radiata)

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Eucalyptus species has a high potential as overstorey tree species in Agrosilvicultural systems. But, many Eucalyptus species are also known for their adverse effects on neighbour plants through allelochemicals.

Our objective was to examine allelopathic effects of E. camaldulensis on Vigna radiata through litter, leaf leachate and soil. Two plant house experiments were conducted at the University of Peradeniya from July to October, 1986.

Soil, litter and leaves (for leaf leachate) were taken from four different E. camaldulensis plantation forests. Two levels of soil (normal and oven dried) and litter (presence and absence) were used, in a factorial combination, in the Experiment One. Five different leaf leachate concentrations (100%, 75%, 50%, 25%, 0%) were used in the Experiment Two. In both experiments, germination percentage, germination period, plant height, time taken to flowering, shoot dry weight, root dry weight, per plant pod number, number of seed per pod and per plant seed weight were measured.

The results showed that there were no significant allelopathic effects of E. camaldulensis on V. radiata on any growth process. But it is cautioned that, while removing allelopathic compounds from soil, many beneficial elements may also have been possibly eliminated in the control treatments.

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