

Allelopathic Effects of *Eucalyptus camaldulensis* and *E. gomphocephala* on Seed Germination and Seedling Growth of Barley

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Abstract : This research is aimed to study allelopathic effects of two wind breakers *Eucalyptus camaldulensis* and *E. gomphocephala* on germination and growth of barley using aqueous extracts of leaves at 0.5, 1, 5, and 10% concentrations for treatment of barley caryopsis in petri dishes incubated in growth chamber. Distilled water was used in the experiment as a control. Seed germination was recorded on daily basis for five days. After ten days measurements of root length, shoot length, fresh and dry weight of root and shoot were taken. With the exception of 0.5% *E. gomphocephala* extract effect on length and dry weight of barley root, all the tested extract concentrations for both eucalyptus species significantly decreased the percent and speed of germination, root and shoot length, fresh and dry weight of root and shoot of barley compared to the control. For both species the allelopathic effect was significantly increasing with the increase of the extract concentration. Although, higher allelopathic effect was shown by *E. camaldulensis*, the results indicating that both eucalyptus species should not be recommended as wind breakers for barley fields.

Keywords : allelopathy, eucalyptus, barley, Libya

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