

# ALLELOPATHIC EFFECT OF PLANT EXTRACTS ON SEED GERMINATION IN *VIGNA MUNGO* (L.) HEPPER

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**Abstract:** Allelopathic effect of plant extracts on seed germination was studied in *Vigna mungo* (L.) Hepper. Plant extracts taken were aqueous extracts of *Eucalyptus* leaves and of roasted coffee beans of *coffee arabica*. Allelopathic effect studied showed hormonal effect. The plant extract concentrations taken in both the cases were concentrations W/V-1:200; 1:250; 1:500 and 1:1000; alongwith water control. Germination percentage was observed for 5 days in each plant extract concentrations and in control. The studies were made in light and dark in each case. In case of light conditions diffuse day light was provided in lab conditions. In *Eucalyptus* leaf extract in light, germinations was promoted at all concentrations except at concentration W/V – 1:500. In dark it increased germination at high concentration, W/V-1:200 and decreased at dilute concentration, W/V-1:1000. Coffee extract in light increased seed germination at concentrations, W/V-1:250 & W/V - 1:500 but inhibited at high concentration W/V-1:200. In dark, the effect was same as in control. Decrease in germination was observed at low concentration, W/V-1:1000.

Mortality among germinants has also been studied. Mortality may be due to phytotoxicity. Since out of all germinants some showed tendency to abort or perish and the word 'abort' has been used here in boarder sense. Besides abortive seedling percentage, surviving seedling percentage has also been observed. A higher percentage of surviving seedling indicated control over phytotoxicity.

**Keywords:** Plant extracts, Seed germination, Allelopathic effect, Abortive seedling percentage, Surviving seedling percentage, Phytotoxicity

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