

**BIO CHEMICAL IMPACT OF COFFEE EXTRACT ON PLANT
DEVELOPMENT: SPECIAL REFERENCE TO SEEDLING GROWTH IN
*PHASEOLUS LUNATUS***

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Abstract: Coffee is an important beverage taken and inhaled practically by all persons of the world. How does it affect individual's specially biological materials? It has been a point of query in a number of medicinal studies taken over on human health. Similar study on plants i.e. biochemical impact of coffee extract on plant development specially growth has been taken over here. The investigation is specially taken over with special reference to seedling growth in *Phaseolus lunatus*.

Coffee beans with a number of biochemical ingredients including chiefly caffeic acid and chlorogenic acid typically influence plant growth. Seedling growth in *Phaseolus lunatus* is taken here as an example. Coffee extract is taken at concentrations W/V – 1:200; 1:250; 1:500 and 1:1000. The effect of seedling growth is studied both in light and dark.

In light favourable concentration of coffee extract for seedling growth specially for root length, shoot length and total seedling length was found to be W/V – 1:200. For shoot ratio it was W/V – 1:1000.

In dark root length, shoot length and total seedling length showed decline in coffee extract at all concentration except at W/V – 1:200. In dark at root ratio 1, shoot ratio showed decline in coffee extract. However, minimum decline was observed at concentration W/V – 1:1000. In dark leaf expansion was also studied. Increase in leaf length and leaf breadth was found at concentration, W/V – 1:200, as compared to control. Rest of the concentrations showed irregular changes.

Keywords: Biochemical impact, Coffee extracts, Plant development, Seedling growth, Root length, Shoot length, Total seedling length, Root/Shoot ratio, Leaf expansion

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