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SUMMARY & RESULT  
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## Chapter-8

SUMMARY & RESULT

It was of interest to study the effect of lead as its acetate on seed germination seedling growth and development performance of Zea mays cvs., Oryza sativa cvs. and Vigna radiata (Phaseolus sps.) The result is summarised below :

1. All the concentrations of lead acetate used were inhibitory for seed germination of test plants. Maximum inhibition in seed germination was observed in highest concentration. Minimum inhibition in seed germination was reported in the seeds treated with lower most concentration of lead acetate solution. The concentration of lead acetate solution which was less than lower most concentration used had promotory effect on seed germination, similarly lead acetate solution having more concentration than highest concentration used had lethal effect on seed.
2. In Pb phasic pretreatment studies maximum inhibition in seed germination was in mid phase (Regime-4), minimum inhibition in seed germination was in initial phase (Regime-1) in rest of the phases inhibition was in between the initial and mid phase.
3. Pretreatment as well as postradicle emergence treatment of Pb, were inhibitory to seedling growth, with maximum inhibition at highest concentration.

4. Marked cultivar specific as well as organ specific differences in response to Pb were also reported.

5. Phasic pretreatments indicate that in all the phases there was inhibition of seedling growth.

6. Maximum inhibition of seedling growth was in mid phase and minimum inhibition of seedling growth was in first phase while in rest of the phases it was in between the initial and mid phase.

7. The result of 10mg/kg and 50mg/kg Pb amended soil on test plants suggest that :

(a) Seed germination was promoted at the lower and inhibited at the higher concentrations of lead for all the cultivars studied. The extents of promotion and inhibition showed varietal differences in response to Pb concentrations.

(b) Seedling growth was also promoted and inhibited at the lower and higher concentrations of Pb, respectively. The extents of promotion and inhibition decreases with the age of seedlings. Organ specific and cultivar specific differences exist in response to lead concentrations.

8. Irrigation with polluted water enhanced growth and yield of test plant, however, petro chemical polluted water was inhibitory for seedling growth.