

Studies on the effect of different concentrations of Cr stress on seed germination and seedling growth of *Triticum aestivum* L.

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Heavy metals possess many distressing effects on living organisms either directly and/or indirectly. One of the indirect effects is the change in plant nutritional values. Plants, in their life cycle, are usually exposed to different types of heavy metals which straightforwardly find their way inside the cells from the contaminated soils. Chromium (Cr) is one such metal which affects many physiological processes of the plants and contributes to severe toxicity. But there are plant species which have remarkable metabolic activities, absorption capabilities and transport systems that facilitate the uptake of contaminants selectively from the growth matrix (soil/water). The present study was aimed to understand the effect of Cr on the growth of *Triticum aestivum* L. and to investigate its bioaccumulation efficiency. The seeds were sown in soil supplemented with different concentrations of Cr (10-100 ppm), and the effect of metal on the growth parameters were examined. Results revealed that the increasing concentrations of Cr impaired the germination and growth of the seedlings which was marked by decrease in root and shoot length, biomass and chlorophyll content. Significant accumulation was also observed in the cells as proved from the anatomical and colorimetric studies. Future lies in exploring the metabolically active and genetically modified plants as an effective approach towards the remediation of heavy metals contaminated ecosystem and in establishing vegetation in metal stressed soil.