

Effect of Heavy Metals on Some Biochemical Parameters of Sal (*Shorea robusta*) Seedling at Nursery Level, Doon Valley, India

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ABSTRACT The effects of cadmium, arsenic and lead (1, 5 and 10ppm) on the content of chlorophyll, amino acid, proline, and ascorbic acid were investigated in ten month old sal seedlings (*Shorea robusta*) grown in nursery with various treatment of different concentration of Cadmium, Pb, and As. Control and heavy metal-treated plants were grown for a period of six months in natural condition. Total chlorophyll, amino acid, proline and ascorbic acid content were measured in the leaves of the six month old seedling with the help of UV Spectrophotometer. The result showed that the total chlorophyll and amino acid content decreased with increased concentrations of heavy metals. A significant increase of proline and ascorbic acid content was observed in leaves after a four month exposure to heavy metals. The strongest effect of cadmium, followed by Pb⁺⁺ and As⁺⁺ was observed on total chlorophyll, amino acid, proline and ascorbic acid content of plants.