



## Studies on Effect of Cd and Hg on Biochemical Characteristics of *Populus deltoides* (W. Bartram ex Marshall) and its Uptake

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**Abstract:** A study was carried to evaluate the performance of *Populus deltoides* seedlings grown under stressed condition with different doses of Cd and Hg in pot experiment. Cadmium had significant effect on all the biochemical parameters and mercury had significant effect on chlorophyll and total soluble sugar content. Cd had significant effect on the phenol content of *P. deltoides*, highest phenol content was observed at 20 ppm of Cd (4.72 mg g<sup>-1</sup>), whereas, Hg and the combination of the metals had non-significant effect. The observed ability of *P. deltoides* to continue growth even at higher doses of Cd and Hg and the ability to accumulate metals in its tissues demonstrated its resistance to moderate to high levels of metals. The present study widens the scope for recording the effect of higher concentration of heavy metals beyond 20 ppm in future to confirm the phyto-remediation ability of this species.

**Keywords:** Cadmium, Heavy metals, Mercury, *Populus deltoides*, Phyto-remediation

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