

Assesment of the Economic Potential of Lead Contaminated Brownfield for Growth of Oil Producing Crop Like *Helianthus annus* (Sunflower)

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Abstract : When sparsely used industrial and commercial facilities are retired or abandoned, one of the biggest issues that arise is what to do with the remaining land. This land, referred to as a 'Brownfield site' or simply 'Brownfield' is often contaminated with waste and pollutants left behind by the defunct industrial facilities and factories that stand on the land. Phytoremediation has been proved a promising greener and cleaner technology in remediating the land unlike other chemical excavation methods. *Helianthus annus* is a hyper accumulator of lead. *Helianthus annus* can be used for remediation procedures in metal contaminated soils. It is a fast-growing crop which would favour soil stabilization. Its tough leaves and stems are rarely eaten by animals. The seeds (actively eaten by birds) have very low concentrations of potentially toxic elements, and represent low risk for the food web. The study is conducted to determine the phytoextraction potentials of the plant and the eventual seed harvesting and commercial oil production on remediated soil.

Keywords : Brownfield, phytoextraction, *helianthus*, oil, commercial

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