World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:9, No:01, 2015

Phytoremediation Potential of Hibiscus Cannabinus L. Grown on Different Soil Cadmium Concentration

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Abstract : Contaminated soils and problems related to them have increasingly become a matter of concern. The most common the contaminants generated by industrial urban emissions and agricultural practices are trace metals). Remediation of trace metals which pollute soils can be carried out using physico-chemical processes. Nevertheless, these techniques damage the soil's biological activity and require expensive equipment. Phytoremediation is a relatively low-cost technology based on the use of selected plants to remove, degrades or contains pollutants. The potential of kenaf for phytoremediation on Cd-contaminated soil was investigated. kenaf plants have been grown in pots containing different concentrations of cadmium. The observations made were for biomass production and cadmium content in different organs determinate by atomic emission spectrometry. Cadmium transfer from a contaminated soil to plants and into plant tissues are discussed in terms of the Bioconcentration Factor (BCF) and the Transfer Factor (TF). Results showed that Cd was found in kenaf plants at different levels. Tolerance and accumulation potential and biomass productivity indicated that kenaf could be used in phytoremediation.

Keywords : kenaf, cadmium, phytoremediation, contaminated soil
Conference Title : ICABBBE 2015 : International Conference on Agricultural, Biotechnology, Biological and Biosystems Engineering
Conference Location : Paris, France
Conference Dates : January 23-24, 2015