Phytoremediation Technology useful in Maintaining Green Vegetation.

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Abstract- *Land plants are destroyed by various heavy metals, pollutants, sewage water, explosives, industrial wastes. When plants are planted on this land, they show eradication of various heavy metals and pollutants. It can be minimized by Phytoremediation technology. Phytoremediation technology explained as the use of green plants to clean air, water and soil. Phytoremediation technology useful in maintaining vegetation green. Lead and chromium are remediated by Phytoremediation technology. It's process and mechanism, consists Eicchornea crassipes and Tomato plant.*

Keywords- Phytoremediation, Heavy Metals, Tomato, Eicchornea, Mechanism.

I. Introduction

Phytoremediation is cost effective, solar driven, eco-friendly technology. It is used for green plants to remediate pollutants and clean air, water and environment. It Consists of the processes Phytoextraction-Phytoaccumulation, in which, the soil absorbs the water and air pollutants by precipitation or formation of metal complexes by metal transference takes place with water, thus air pollution is reduced. Phytoremediation Technology consists Phytostabilization - Immobility process, of pollutants by transpiration process. Phytostimulation and Phytofiltration is filtering of the pollutants and leads to degradation by microbes.

II. Aims And Objective

Aim of the present work is to remediation of heavy metals by Phytoremediation technology and Phytoremediator plants i.e. Tomato plant and Eicchornea crassipes. Objective is to remediate heavy metals by these plants and maintain green vegetation.

III. Literature Review

Phytoremediation technology is the use of green plants to clean air, water, soil. Phytoremediation technology useful in maintaining vegetation green [1-3]. Lead and chromium are remediated by Phytoremediation technology by its process and mechanism from Eicchornea crassipes and Tomato plant. Phytoremediation Technology consists of the processes-Phytoextraction i.e., Phytoaccumulation, Phytostabilization -Immobility process [4-6]. Rhizofiltration by roots and by rhizosphere microbes, Phytovolatalization by Transpiration, Phytofiltration, Filtration of pollutants, Phytostimulation, Phytodegradation-By Microbes [7-9]. Tomato and Eicchornea crassipes plant have potential to remediate heavy metals and is maintaining green vegetation.

IV. Methodology

Plants i.e., Tomato and Eicchornea crassipes are grown in pots and treated with Lead (Pb) and Chromium (Cr) and keeping plants for few days. Aerial parts are observed by spectrophotometer (AAS) and analysis is done.

V. Result and Discussion

Heavy metals i.e., lead and chromium are remediated to maximum percentage at different concentration and shows the potential of plants as Phytoremediator plants. Reduction in number of leaf and remediation of heavy metals shows this technology is maintaining green vegetation.

Table 1: Remediation of heavy metals by plants Tomato plant and Eicchornea crassipes plant in percentage.

Plants	Lead	Chromium
Eicchornea crassipes in %	90, with final conc.1ppm of 10 ppm lead	77 with final conc 1.13 mg of 5 mg chromium.
Tomato in %	82.2	

VI. Conclusion

Eicchornea crassipes and Tomato plant by the use of Phytoremediator plants mechanism, maintaining the green vegetation and remediation of heavy metals is taking place.

VII. Future Work

Phytoremediation is cost effective technology and has wide applications. The processes are helpful in cleaning environment. Transgenic plants are helpful in near future. The technology has wide scope.

VIII. Application

Helpful in cleaning soil, air, water, land and remediation of heavy metals, and other contaminants by maintaining green vegetation.

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