

Abstract:

Pollution enter in to the soil from industrial activities contaminated the soil with heavy metals such as Lead, cadmium, copper and zinc. Information regarding to pollution distribution, their reaction and their cleaning in ecosystems are vital. Environmental cleaning of the high concentration of lead is important, due to its toxic effects. Phytoremediation is a technique to remove heavy metals from the soil. Addition of chelating agents can increase the efficiency of absorption of heavy metals by plants. An experiment was conducted to evaluate the effects of ammonium molybdate and ethylene diamine tetra acetic acid (EDTA) on lead absorb by corn and sunflower plant. The experimental design was factorial completely randomized with four lead levels: 0, 150, 300 and 450 mg lead kg⁻¹ of soil as lead chloride, and two chelating agents of ammonium molybdate and ethylene diamine tetra acetic acid and control that were applied with three replications. Results showed that lead significantly reduced corn and sunflower dry weight. Lead increasing significantly reduced shoot and root dry weight and significantly increased lead absorption in shoot and root of corn and sunflower. Corn not only produced more dry weight but also had more ability to absorb the lead than sunflower. Ammonium molybdate had less absorption capabilities in comparison with EDTA. These results suggested that EDTA was more effective than EDTA in increasing the concentration of lead in corn and sunflower.

Key words: Ammonium molybdate, corn, EDTA, lead, phytoremediation, Sun flower.



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Title

**The effect of Ammonium molybdate and EDTA on
phytoremediation of Pb by Corn and Sun flower**

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