

عنوان مقاله:

The effect of superabsorbant on phytoremediation of zinc polluted waters by sunflower

محل انتشار:

اولین کنفرانس بین المللی و چهارمین کنفرانس ملی بازیافت مواد آلی در کشاورزی (سال: 1390)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Intense pollution of industrial wastewater and smTounding lands and pollutants disposal into smface and ground waters, endanger om environment and om water resomces. So, now a days finding solutions for this national and intemational concem is necessary. At cmTent time onecan use different methods to decrease the amount of pollutants in soil and water. Therefore, finding a relatively fast and low cost technology without marginal hatmful effects is vital. Using the natmal processes; for example the biological potentials of green plants, is a reliable and safe solution for these problems and Using superabsorbent polymers is one of the newest soil improving methods. The main goal of this research was to investigate the effect ofsuperabsorbent on phytoremediation of water contaminated with zinc by sunflower. In order to conduct this project six plastic lysimeters with 60 em diameter and 100 em height equipped with a drain pipe at the bottom were filled by granular sandy-loam soil, Super absorbent wasadded to upper palis three of lysimeters. Sunflower were planted in these lysimeters and they were liTigated by clean water lmtil the plants were settled up. Then the inigation was continued by contaminated wastewater which consisted of 17 mg/1 zinc. In order to evaluate the soil ability in absorbing zinc, the drain effluent was measmed and analyzed. The concentration of zinc in drain effluent of alllysimeters was under the standard llInits and the perf01mance of the system in absorbing zinc was fmmd satisfact01y up to 88.85% also, superabsorbent consumption increased Biomass significantly (5%) and .(decreased zinc accumulation in stem (5%

کلمات کلیدی:

superabsorbent, SImflower, lysimeter, zinc, industrial wastewater

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