

XVI International Botanical Congess

Abstract Number: 4240

Poster No. = 2462

EVALUATION OF THE PHYTOREMEDIATION POTENTIAL OF INDUSTRIAL HEMP

Slavik Dushenkov, Phytotech, 1 Deer Park Drive Suite I, Monmouth Junction NJ 08852 USA

Industrial hemp cultivars, Zolo-11, USO-31 and Zolo-15, were tested for their ability to accumulate U and Pb in the above-ground> biomass. Plants were grown in soils with an average content of U 336_1 mg/kg (OH), Pb 911_53 mg/kg (NJ), or Pb 571_86 mg/kg> (farm soil). Results demonstrated that hemp is potentially a good phytoremediation crop. This fast growing, high biomass crop grew normally in the Pb- or U-contaminated soil. Industrial hemp responded positively to Phytotech+s amendments and accumulated> up to 5,447 mg/kg Pb and up to 560 mg/kg U from the soils that contained just 571 mg/kg Pb and 336 mg/kg U respectively. Cultivars of industrial hemp significantly differ in the ability to accumulate Pb and U, hence extensive screening may produce cultivars with better phytoremediation capacity.

HTML-Version made 7. July 1999 by Kurt Stüber