Compatability of Different Bioavailability Indices for Metal Contaminated Soils. (S11-brown125200-Poster)

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Abstract:

A cooperative greenhouse study was conducted to evaluate the potential for different soil amendments to reduce the bioavailabiity of Pb, Zn and Cd in situ. Soils used for the study included tailings materials from three historic mining sites and a soil from an inner city garden. Amendments included P added as phosphoric acid, limestone, water treatment residuals and municipal biosolids. Efficacy of the amendments was evaluated using plant response, microbial assays, soil extracts and a physiologically based extraction test (PBET). Both the P and biosolids amendments were successful at restoring a plant cover to the materials. The efficacy of the P amendment decreased with subsequent harvests of rye grass. Microbial activity was greatest in the biosolids amended treatments but results were not consistent. Reductions were also seen in the P and biosolids treated soils in both extractable and PBET metals.

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