BASELINE CONCENTRATION OF HEAVY METALS IN BRAZILIAN LATOSOLS. (S11-guilherme141816-Poster)

Authors:

- M.L.Campos - *UFLA, Lavras (Brazil)*
- M.A.P.Pierangeli - *UFLA, Lavras (Brazil)*
- L.R.G.Guilherme* - *UFLA, Lavras (Brazil)*
- J.J.Marques - *UFLA, Lavras (Brazil)*
- N.Curi - *UFLA, Lavras (Brazil)*

Abstract:

Knowledge of baseline concentrations for heavy metals of environmental and agricultural concern in tropical soils is still lacking. This paper compared two methods for heavy metal extraction from soils, and provided baseline values of heavy metals for Brazilian Latosols (Oxisols). The soil samples came from the 0-0.2-m layer of 19 different Latosols from the various geographic regions of Brazil. The first experiment compared the USEPA method 3051A with the aqua regia extraction regarding Pb determination. The second determined contents of Cd, Cu, Ni, Pb, and Zn using the USEPA method 3051A. Heavy metal contents were assessed by flame atomic absorption spectroscopy. Although both methods were highly correlated, the USEPA-3051A rendered Pb contents 29% higher in average than the aqua regia. Average (standard deviation) values (mg/kg) for heavy metals in Brazilian Latosols are: 0.66 (0.19) for Cd, 65 (74) for Cu, 18 (12) for Ni, 22 (9) for Pb, and 39 (24) for Zn. Considerably variation is due to the inclusion of Latosols derived from a variety of parent materials. The values provided can be used as reference baseline concentrations for heavy metals in Brazilian Latosols.

Corresponding Author Information:

Luiz Guilherme
Universidade Federal de Lavras
DCS-UFLA - C.P. 37
Lavras, MG 37200-000
Brazil

phone: 55-35-38291259
fax: 55-35-38291252
e-mail: guilherm@ufla.br

Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 10:00 am-12:00 pm
Poster Board Number: 1515

Keywords:
Oxisols, Brazil, Heavy metal, Baseline concentration