Distribution of Soil Testing Phosphorus in Florida. (S08-chen193951-Poster)

Authors:

- M.Chen* - *EREC, University of Florida, Belle Glades, FL*

Abstract:

Soil testing phosphorus (STP) has traditionally been used for determining the potential for crop response to fertilizer phosphorus. Recent research has established a positive linear correlation between STP and the concentration of dissolved phosphorus in runoff water. In this study, historical background concentrations of STP in representative Florida surface soils were determined and evaluated using Melich -1 extractant. Background STP varied from 0.2 to 384 mg P/kg for undisturbed near pristine soils with a geometric mean (GM) of 7.4 mg P/kg. Concentrations of STP decreased in the order of Histosols (GM = 25.0 mg P/kg), Mollisols (11.5 mg P/kg), Alfisols (8.7 mg P/kg), Spodosols (7.0 mg P/kg), Ultisols (6.7 mg P/kg), Entisols (4.4 mg P/kg) and Inceptisols (4.3 mg P/kg). Over 75% of these soils are rated as 'low' or 'very low' and less than 5% as 'very high' categories, based on the current University of Florida Institute of Food and Agricultural Sciences STP recommendations.

Corresponding Author Information:

Ming Chen
University of Florida
3200 E. Palm Beach Road
Belle Glades, FL 33430-4702

phone: 561-993-1527
e-mail: Mchen@mail.ifas.ufl.edu

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