An Environmental Research Strategy for Broad-Based Planning - Lancaster County, Nebraska. (S08mays164223-Oral)

Authors:

- M.D.Mays* USDA_NRCS, Lincoln, NE
- M.A.Elrashidi USDA-NRCS, Lincoln, NE
- S.Peaslee USDA-NRCS, Lincoln, NE
- P.Cowsert USDA-NRCS, Lincoln, NE

- S.Scheinost USDA-NRCS, Lincoln, NE
- D.Schroeder USDA-NRCS, Lincoln, NE
- N.N.Shapoval USDA-NRCS, Lincoln, NE
- S.W.Waltman USDA-NRCS, Lincoln, NE

Abstract:

The objective of this study is to demonstrate how carefully selected point data can be used with soil survey data for broad-based planning. The general soils map of Lancaster County, NE shows 11 soil series are included with 80% of the map units. Therefore, sixteen sampling sites, eight grassed and eight cultivated (176 samples) were selected. The samples were analyzed at the USDA-NRCS Soil Survey Laboratory using Mehlich 3 as an extract and an ICP. Results show that Mehlich 3 can be used as a universal extractant for P and at least 14 other environmentally sensitive elements(i.e., Ba, Cd, Co, Cu, Pb, Se, Zn). Such data are economical to obtain and can be used for screening in making decisions relating to nutrient management and potential environmental risk. Common tools used in soil survey, such as GIS, can be used to efficiently display these data. However, there is a need to relate these data to background levels and local conditions. We suggest that data from Mehlich 3 analysis can be utilized in soil survey update projects for added value and efficiency. The additional information can also be used for developing field guides to assist landusers.

Corresponding Author Information:
Major Mays
USDA-NRCS
Fed. Bld., Room 152, 100 Centennialphone: 402-437-5138
fax: 402-437-5760
e-mail:
dewayne.mays@usda.gov
Lincoln, NE 68508-3866

Presentation Information:

Presentation Date: Wednesday, November 13, 2002 Presentation Time: 3:30 pm

Keywords:

Phosphorus, Nutrient Management, GIS, Soil Survey