Phosphorus Accumulation in North Carolina Piedmont Soils Utilized for Animal Waste Applications. (S11-yarborough100030-Poster)

Authors:

- T.K.Yarborough* - *North Carolina Department of Agriculture*
- R.L.Mikkelsen - *North Carolina State University*
- S.C.Hodges - *North Carolina State University*

Abstract:

In the Piedmont and Mountain regions of NC, clay soils occupy the landscape where dairy and poultry farms are major agricultural enterprises. Animal waste utilization is an important aspect of these operations. There is an increasing concern over P movement, particularly subsurface losses, because limited information related to P leaching on clay soils exists. Using previous soil test data from poultry or dairy operations in ten counties, sites were selected where Mehlich 3 P levels were > 240 kg/ha. Soils were characterized to a depth of 90 cm in 10-cm increments relative to Mehlich 3 extractable P concentrations and soil texture. The sites ranged from 194 kg/ha to 2722 kg/ha of Mehlich 3 P in the surface 10 cm. Clay content ranged from 2% in the surface to 69% in the subsurface. Preliminary results indicate that the clay content is the most significant factor that influences P leaching. These samples will be analyzed for Mehlich 3 aluminum and iron. This study will provide needed information on the leaching of P in clayey soils receiving animal waste.

Corresponding Author Information:

T. Kent Yarborough
North Carolina Department of Agriculture
4300 Reedy Creek Road
Raleigh, NC 27607

phone: 919-733-2655
fax: 919-733-2837
e-mail: kent.yarborough@ncmail.net

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