

Characterization of Phosphorus in Poultry Litter. (S11-xia131613-Poster)

Authors:

- K.Xia* - *Dept. of Crop and Soil Sci., U. of Georgia*
- S.D.Cox - *Dept. of Crop and Soil Sci. U. of Georgia*
- P.Schroeder - *Dept. Crop and Soil Sci. U. of Georgia*
- A.S.Tasistro - *Dept. Crop and Soil Sci. U. of Georgia*
- M.Cabrera - *Dept. Crop and Soil Sci. U. of Georgia*

Abstract:

Speciation of phosphorus in a poultry litter was characterized by sequential extraction using water, weak and strong base, and weak and strong acid. The extracts were analyzed using Molybdo-ascorbic acid estimation method, ICP, and ^{31}P nuclear magnetic resonance Spectroscopy (NMR). The concentrations of water-extractable P (soil:water = 1:50) were between 2000 to 6000 mg/kg. Molybdo-ascorbic acid estimation of water-extractable P indicated more than 95% of inorganic P. The NMR results suggested small quantity of water-extractable P was phytate. Molybdo-ascorbic acid can react with phytate and therefore has the potential of overestimating inorganic P. A variety of organic P was found in non-water soluble portion of the litter.

Corresponding Author Information:

Kang Xia	phone: 706-542-0899
The University of Georgia	fax: 706-542-0914
3111 Miller Plant Science Building	e-mail: kxia@uga.edu
Athens, GA 30603	

Presentation Information:

Presentation Date: Tuesday, November 12, 2002
Presentation Time: 10:00 am-12:00 pm
Poster Board Number: 2124

Keywords:

phosphorus speciation, poultry litter, NMR