# Soil Properties of Sites Used for Composting Animal Manure. (A05-ginting120758-Poster)

#### Authors:

- D.Ginting UNL, NE
- B.Eghball USDA-ARS, Lincoln, NE
- D.T.Walters UNL, NE
- C.A.Francis UNL, NE

## **Abstract:**

Long-term animal manure composting creates zones of high soil nutrient and salinity. Once the composting operation is terminated, there is a need to reclaim the sites for agricultural crops. The objective of this study is to evaluate soil properties and performance of corn (Zea mays), sorghum (Sorghum bicolor), barley (Hordeum vulgare), wheat (Triticum aestivum), and alfalfa (Medicago sativa) on land previously used as composting sites. Two sites previously used for windrow composting were planted with crops of interest perpendicular to the direction of the windrows. Soil samples were collected at 15 or 30 cm interval to a depth of 3.7 m from the compost and control areas (non-compost, within 100 m of the compost sites). Soil EC of the control site was uniform with depth to 3.7 m and less than 0.4 dS/m. In the compost sites, soil electrical conductivity (EC) ranged from 0.8 to 3.3 dS/m in the 1-m depth. High EC, K and Na in the 0-15 cm, and soil crusting in the windrow areas resulted in poorer germination and crop performance in the windrow than the inter-windrow areas especially in the first year. Crop yields were low and no alfalfa yield was observed in the compost areas.

#### **Corresponding Author Information:**

Daniel Ginting University of Nebraska Lincoln 9222 Dargent CT Lincoln, NE 68526 phone: (402) 472-0258 e-mail: dginting2@unl.edu

## **Presentation Information:**

Presentation Date: Tuesday, November 12, 2002 Presentation Time: 9:00-11:00 am Poster Board Number: 238

- T.J.Klopfenstein UNL, NE
- C.B.Wilson UNL, NE

# Keywords:

compost, nutrient leaching, salinity, manure