Utilizing Pulverized Trommel Fines as a Soil Amendment. (A05-smiciklas111914-Oral)

Authors:

- K.D.Smiciklas* - *Illinois State*
- P.M.Walker - *Illinois State University*
- T.R.Kelley - *Illinois State University*

Abstract:

This study investigated the use of pulverized trommel fines (PTF) as an annual soil amendment for corn and soybean production. Data has been collected in 2000 (corn) and 2001 (soybean) to determine the effects of PTF application on plant growth at the Beecher landfill located near Goodenow, IL. Four treatments were evaluated; 0 (control), 54, and 108 Mg PTF/ha; and 172 kg N/ha inorganic fertilizer nitrogen (N). For corn, the control treatment produced the lowest yielding plants, the 54 Mg PTF/ha and the inorganic fertilizer N treatment produced plants with similar dry weights and grain yield. The 108 Mg PTF/ha treatment produced corn plants with the greatest dry weight and grain yield per plant. For soybean, the inorganic fertilizer N treatment and control treatment produced plants with the greatest dry weight and seed yield. The 54 and 108 Mg PTF/ha treatments had fewer plants with the lower dry weight and seed yield. Significant increases of 100 to 1,000 percent to soil nutrient status were observed for the 108 Mg PTF/ha treatment. These results need to be verified over a number of years to assess seasonal variability patterns.

Corresponding Author Information:

Ken Smiciklas
Illinois State University
5020 Agriculture
Normal, IL 61790-5020

phone: 309-438-5654
fax: 309-438-5653
e-mail: kdsmici@ilstu.edu

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