Composition and Decomposition of Peanut Residues. (S04-balkcom085448-Poster)

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Abstract:

Limited information exists on the mineralizable nitrogen (N) content of peanut (Arachis hypogaea L.) residue. The objective of this study was to determine the N contribution of pre- and post harvest peanut residue on two soil types. Aboveground peanut residue (cv. Georgia Green) was collected prior to digging and immediately after harvest of peanuts. Leaf and stem residues were analyzed for carbon (C), N, lignin, and cellulose. Residue (4.5 Mg ha-1) was applied to a Tifton loamy sand (fine-loamy, kaolinitic, thermic Plinthic Kandiudult) and Greenville fine sandy loam (fine, kaolinitic, thermic Rhodic Kandiudults) and aerobically incubated for 98 d in the dark at 25 degrees to determine N mineralization. Both soil types were incubated simultaneously, without residue, and used as controls. Pre-harvest residue had lower C and higher N concentrations, while post harvest residue had higher C and lower N concentrations. The corresponding effects on C/N ratio did not result in subsequent differences between amounts of cumulative N mineralized. This data indicates that peanut residue may not contribute significant amounts of N to soils.

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