Topsoil Regeneration Using Processed Municipal Solid Waste Pulp. (A02-busby140815-Poster)

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Abstract:

A partnership between ERDC-CERL, Fort Campbell, and the USDA-ARS is utilizing a new technology that sterilizes municipal solid waste and separates out the organic fraction into a pulp product. This research will determine if land application of the pulp can improve soil physical and chemical properties on military training areas and aid in establishment of native grasses. A preliminary study of the pulp on native grass germination showed no difference between pulp rates up to 11.2 Mg/ha (5 tons/ac) and control; however, pure pulp significantly hindered germination due to its hydrophobic properties. Evaluation of the pulp as a soil amendment is being conducted at two sites located on degraded Fort Campbell training areas during the 2002 and 2003 growing seasons. Rates of 4.48, 8.96, 17.92, and 35.84 Mg/ha (2, 4, 8, and 16 tons per acre), as well as controls with and without native grass revegetation, are being compared by measuring species composition, aboveground biomass, plant tissue analysis, and soil physical and chemical properties. Interim results from the 2002 growing season will be presented.

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