Nutrient Uptake by Orchardgrass and Sudangrass Fertilized With Poultry Litter. (C06-sleugh141647-Oral)

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Abstract:

Continued poultry litter application to land can lead to nutrient buildups that may cause water pollution and nutrient imbalances. Our objective was to investigate nutrient uptake by orchardgrass and sudangrass to determine if they could be used as a viable nutrient removal tool. Treatments included litter applied to orchardgrass and sudangrass at the recommended N rate, at recommended P rate plus supplemental inorganic N, at recommended P rate, and inorganic fertilizer. Forage was analyzed for CP, P, Cu, Zn, and Fe. There were differences in CP, Zn, P, and yield in sudangrass while P, Fe, Zn, Cu, and yield showed treatment effects in orchardgrass. Litter applied at recommended P rate had lowest yields, however, yield advantage provided by other treatments was small. Our findings indicate that application of poultry litter based on a recommended P rate followed by addition of supplemental inorganic N could, in some instances, lower the accumulation of certain minerals in the soil, reduce the likelihood of adverse environmental impacts, and provide comparable yield to higher litter application rates.

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