Bermudagrass Cultivar Response to Broiler Litter. (S08brink160733-Poster)

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Abstract:

Bermudagrass (Cynodon dactylon (L.) Pers.) has the greatest potential among typical Southeastern forages to recover nutrients from soil fertilized with broiler litter. Our objective was to determine differences in yield and nutrient uptake among diverse bermudagrasses fertilized with broiler litter. 'Alicia', 'Brazos', 'Coastal', 'Russell', 'Tifton 44', and 'Tifton 85' hybrid bermudagrass, and common bermudagrass were grown on a Savannah fine sandy loam (fineloamy, siliceous, semiactive, thermic Typic Fragiudult) and fertilized with 16 Mg litter/ha/yr to provide 500 kg total N/ha/yr and 290 kg P/ha/yr (mean of 4 yr). Annual yield of Russell (18.70 Mg/ha) exceeded that of all entries except Alicia due to greater first harvest yield. Common bermudagrass had lowest annual yield (11.85 Mg/ha), but greatest N and P concentration. The statistically significant but relatively small differences in nutrient uptake (300 to 350 kg N/ha and 45 to 54 kg P/ha) among hybrid bermudagrass cultivars are inconsequential if litter application rates are N-based. Factors as forage quality, seasonal yield distribution, winter-hardiness, availability, and establishment cost may thus be given equal consideration.

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