

Bermudagrass harvest management options with poultry litter fertilization

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USDA-ARS research plots where forage bermudagrass was harvested in summer (June to September) at different frequencies and stubble heights. The study sought to develop a management practice for balancing forage nutritive value with phosphorus removal in the harvested biomass.

When fertilizing bermudagrass with poultry litter, turfgrass managers must consider limiting the buildup of soil P or drawing down soil test P through cut-and-carry forage. Bermudagrass P removal is closely associated with dry matter (DM) yield and can be altered through management variables like variety, plant maturity at harvest, and litter application rate or timing. Given the tradeoff between DM yield and the amounts of crude protein and digestible DM in bermudagrass, managing harvests to maximize P recovery may adversely impact forage nutritive value.

New research in *Crop, Forage & Turfgrass Management* reports on the response of forage nutritive value and P removal to the combined effects of harvest interval and stubble height in Russell and Tifton 44 bermudagrass receiving 4 tons acre⁻¹ of poultry litter supplemented with 98 lb acre⁻¹ N each spring from 2005 to 2007. Soil test P increased by approximately 60 mg kg⁻¹, but there was no difference in soil P accumulation in the harvest interval × stubble height plots in autumn 2007.

The authors concluded the following best management practices: (i) cutting every 35 days at a 3-cm residual stubble height and (ii) harvesting at an advanced stage of maturity in situations where high soil test P is of greater concern than forage nutritive value.

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Read, J.J., Lang, D.J., Adeli, A., & Jenkins, J.N. (2020). Managing harvest of 'Russell' and 'Tifton 44' bermudagrass receiving broiler litter for nutritive value and phosphorus removal. *Crop, Forage & Turfgrass Management*, 6.

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