



Synergy in Science: Partnering for Solutions

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Start

429-20 Soil Fertility Requirement for the Establishment of Six Brazilian Natives Turfgrass Genotypes.

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Genus *Paspalum* (Poaceae) includes several species of potential economic importance for foraging, turf and ornamental purposes. Besides the potential of these species little is known in Brazil about the agronomic performance of cultivars and their nutritional requirements. Lime and P and fertilizers are the most common issues input for this turf grass establishment on the high weathered, low-fertile and acids soils of tropical region. Traditional development measurements of turf grass include the % of soil coverage and aboveground biomass production. Furthermore sensors based on visible reflectance are non-destructive and contactless method which can be very useful to assess the turf grass development. The aim of this study was to evaluate the establishment and spectral reflectance of six Brazilian natives turfgrass genotypes grown in different soil fertility level. Six Brazilian natives turfgrass genotypes (*Paspalum notatum* - BRA-012254; *Paspalum notatum* - BRA-019178; *Paspalum leptum* - BRA-023591; *Paspalum notatum* - BRA-006301; *Paspalum notatum* - BRA-025020; *Axonopus parodii* - BRA-002658) were grown in a Typic Hapludox with two different soil fertility level level: low (P = 5 mg/dm³; basis saturation - V = 47%) and medium (P = 20 mg/dm³; basis saturation - V = 60%). Plants were evaluated for % of soil coverage and aboveground biomass production. Canopy reflectance data were collected one day before harvest using a Crop Circle ACS-430 light sensor. *P. leptum* and *A. parodii* genotypes differed on dry matter yield and % soil coverage due soil fertility levels unlike *P. notatum* genotypes. Simple ratio and chlorophyll index calculated from the spectral reflectance were related to dry matter production and soil coverage, indicating their potential to predict turfgrass establishment parameters. See more from this Division: [SSSA Division: Soil Fertility & Plant Nutrition](#)
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