Correlation of Plant and Soil Nutrient Levels With Growth And Quality Parameters Of Dwarf Cynodon Cultivars. (C05-higby095210-Oral)

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Abstract:

Modern turfgrass management involves precise management of turfgrass nutritional needs. Historically soil testing has been used exclusively as a source of information for nutrient management practices. Tissue analysis can also be used to identify a nutritional condition but requires extensive laboratory analysis. Interpretation of the soil and tissue analyses requires a good correlation between the obtained data and the anticipated plant response. This research project generated data from a correlation study between turfgrass macronutrient composition, growth and quality parameters, and the underlying soil nutrient levels. Two dwarf bermudagrass (Cynodon spp.) cultivars, Tifdwarf and FloraDwarf, were examined in mirrored fertility trials receiving scheduled N, P, and K applications ranging from deficient to excessive. Results for nitrogen effects are not unexpected as the increasing incremental rates correlated well with favorable growth parameters. Phosphorous and potassium, however, resulted in escalating and diminishing variations in the turfgrass tissue nutrition, respectively. These unanticipated trends were quantified from repeated measures taken over multiple growing seasons.

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