Effects of Morning and Afternoon Shade in Combination with Traffic Stress on Seashore Paspalum. (C05-jiang194413-Oral)

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Abstract:

Shade in conjunction with traffic stress is a problem for turfgrass in athletic fields within stadium. The objective of this study was to assess effects of morning shade (AMS) and afternoon shade (PMS) alone and in combination with wear (WD) and wear plus soil compaction (SR) on 'Sea Isle 1' seashore paspalum (Paspalum vaginatum Swartz). Two consecutive field trials were conducted under sports field conditions in 2001 at the Georgia Experiment Station at Griffin. 'T' shaped structures constructed of plywood were used to provide AMS and PMS. A wear device and a studded roller device simulated WD and SR to turf plots, respectively. Only minor differences in turf performance were found between AMS and PMS under non-traffic treatment, however, a strong interaction between shade and traffic was observed. Paspalum when subjected to AMS combined with WD or SR traffic generally had better turf quality and density, less tissue injury, higher normalized difference vegetation index and canopy water band index, and lower stress index from 7 to 21 days after treatment than grasses exposed to PMS under WD or SR, respectively. Results indicated that AMS had less detrimental influences than PMS on growth of turfgrass subjected to traffic stresses

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