

Growth responses of salt tolerant turfgrass to salinity stress

ABSTRACT

To select the most suitable salt tolerant turfgrass species, an experiment with five salt water concentrations viz., 0, 12, 24, 36 and 48 dS/m was carried out. The result of this experiment revealed that relative shoot growth of *Paspalum vaginatum* Sw., *Zoysia matrella* (L.) Merr. and *Cynodon dactylon* (L.) Pers. 'satiri' were 80, 68 and 67%, respectively over the control at the highest salinity level (48 dS/m). *Paspalum vaginatum* produced the highest shoot density in every salinity levels among the tested species. Turf quality ratings followed the same trend as leaf firing and turf colour index, which were the best in *P. vaginatum* and *Z. matrella* across all salinity levels, but quality ratings were slightly better in *P. vaginatum* due to higher shoot densities at all salinity levels compared to *Z. matrella* and *C. dactylon* 'satiri'. Therefore, *P. vaginatum* was found to be the most suitable salt tolerant species compared to *Z. matrella* and *C. dactylon* 'satiri'.

Keyword: Growth response; Turfgrass; Salinity stress