

## **Relative salinity tolerance of warm season turfgrass species.**

### **Abstract**

Fresh water coupled with soil salinization in many areas has resulted in an increased need for screening of salt tolerant turf grasses. Relative salinity tolerance of eight warm season turfgrass species were examined in this study in sand culture. Grasses were grown in a glasshouse irrigated with either distilled water or saline sea water adjusted to 24, 48 or 72 dSm<sup>-1</sup>. Salt tolerances of the grasses were assessed on the basis of their shoot and root growth leaf firing and turf quality. Regression analysis indicated that *Zoysia japoica* (Japanese lawn grass) (JG) *Stenotaphrum secundatum* (St. Augustine) (SA), *Cynodon dactylon* (satiri) (BS) *Zoysia tenuifolia* (Korean grass) (KG) *Digitaria didactyla* (Serangoon grass) (SG) *Cynodon dactylon* (Tifdwarf) (TD) *Paspalum notatum* (Bahia grass) (BG) and *Axonopus compressus* (Pearl blue) (PB) suffered a 50% shoot growth reduction at 36.0, 31.8, 30.9, 28.4, 26.4, 25.7, 20.0 and 18.6 dSm<sup>-1</sup> of salinity respectively and a root growth reduction at 44.9, 43.7, 33.4, 31.0, 29.5, 27.5, 21.5 and 21.4 dSm<sup>-1</sup> of salinity respectively Leaf firing and turf quality of the selected species as a whole were also found to be affected harmoniously with the change in root and shoot growth On the basis of the experimental results the selected species were ranked for salinity tolerance as JG>SP>BS>KG> SG>TD>BG>PB.

**Keyword:** Salinity tolerance; Turfgrass; Seawater; Relative growth.