

Genotypic Response to Salt Stress: II – Pattern of Differential Relative Behaviour of Salt-Tolerant, Moderately Salt-Tolerant and Salt-Sensitive Wheat Cultivars under Salt Stressed Conditions

Ravi Sharma^{1,2*}

1. *Eco-Physiology Laboratory, Department of PG Studies & Research in Botany, K. R. College, Mathura*

2. *Formerly Head Department of Botany K R College, Mathura and Ex-Principal ESS ESS College, Agra (Dr B R Ambedkar University formerly Agra University, Agra) 281001 UP India*

E-mail: drravisharma327@yahoo.com.

Abstract: Screening of 42 wheat (*Triticum aestivum* L) cultivars for their relative salt tolerance at the early seedling stage showed only 11 cultivars found to have < 60% reduction in shoot growth while majority of the 31 had > 60% reduction at 16 EC dsm-1 in contrast with root growth where almost a reverse trend was noticed as only 15 cultivars showed > 60% reduction whereas 27 had < 60% reduction proving shoot to be more sensitive to salinity than the root demonstrating shoot growth to be a better index of relative salt tolerance. Further, a level of 12 EC was found to be critical level. Based on these observations all the cultivars were categorized into salt-tolerant, moderately salt-tolerant and salt-sensitive groups exhibiting < 40%, 40 - 60% and > 60% reduction respectively in shoot length at 12 EC (dsm-1) over control. Thus, a clear pattern of differential relative behavior of the three groups is visible in the gradual decrease in shoot growth in both the salt-tolerant and moderately salt-tolerant cultivars and a sharp decline in the salt-sensitive cultivars.

Keywords: Wheat cultivars, salt stress, salt-tolerant, moderately salt-tolerant, salt-sensitive



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