

SCREENING OF WHEAT GENOTYPES AGAINST HYPOXIA-SALINITY INTERACTION

Khalid Javed, R. H. Qureshi, M. Aslam and J. Akhtar*

ABSTRACT

Genotypic response of nine wheat cultivars to different salinity and hypoxia levels and in combination were studied in matrix culture for the growth and ionic relations. Wheat exhibits genotypic differences in tolerance to salinity but such differences in response to hypoxia alone and in combination have not been much explored. Under waterlogged conditions the effects of salinity stress are accepted to be accentuated further. This experiment was laidout at three salinity levels (0, 7.5 dS m⁻¹, 15.0 dS m⁻¹ EC that was developed by NaCl + CaCl₂ in the ratio of 10:1) and two aeration levels (aerobic and hypoxic). Hypoxic conditions were developed by stagnating the solution in root zone. The tolerant variety (Pb.85) produced comparatively more biomass while, the least was found in the sensitive variety (7-Cerros). Accumulation of Na⁺ and Cl⁻ was more in the sensitive cultivars compared with tolerant one whereas, K⁺ concentration reflected the opposite trend.