Genotype variability on coriander to salinity at emergence and osmotic stress at germination
V. KRISHNAMOORTHY

ABSTRACT
An experiment was carried out at the Department of Crop Improvement, Anbil Dharmalingam Agriculture College and Research Institute, Tamil Nadu Agricultural University, Navalurkuttappatu, Trichy, Tamil Nadu on 54 coriander genotypes to study the effect of salinity on the emergence. CS18, CS13, CS32, CS16, CS123 and CS 04 were more vigorous than other genotypes. Only one genotype CS18 registered highest mean emergence (8.10) at 0.1M NaCl and was found to be highly tolerant. CS36, CS51, CS88, CS115, CS120, CS121, CS159, CS169, CS182, CS188, CS214 were found to be highly susceptible to saline concentration of 0.05M and 0.1M NaCl. The highest mean emergence in the genotypes was in the range of CS18 (20.10) > CS13 (18.0) > CS32 (18.0) > CS16 (17.40) > CS123 (17.20) at 0.05M NaCl. Fifty four different coriander genotypes were evaluated at different levels of osmotic stress. Six coriander genotypes viz. CS18, CS13, CS32, CS16, CS123 and CS104, were more vigorous than rest of genotypes. CS18 could withstand more negative water potential of -8Mpa and put forth around 85 per cent germination. Very low (5%) germination was observed in CS216, CS03, CS02, CS215, CS65 and CS124 at -8Mpa. CS36, CS188, CS214 were highly susceptible even at low level of moisture stress -2Mpa. CS18 was found to be tolerant and has recorded 100 and 85 per cent germination at -2 and -5Mpa respectively.

Key words: Emergence, Genotype, Germination, Osmotic stress, Salinity