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Seed germination and recovery responses of *Suaeda heterophylla* to abiotic stresses

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Seed germination and recovery from salt stress of an annual halophyte *Suaeda heterophylla* (Kar. & Kir.) Bunge to different iso-osmotic concentrations (0, -0.46, -0.92, -1.38, -1.84, and -2.30 MPa) of NaCl and PEG-6000 at 15/25, 20/30 and 25/35°C in both 12-h temperature and light regimes and in complete darkness were studied. Maximum number of seeds germinated in distilled water and increase in concentrations of both NaCl and PEG-6000 decreased germination at all temperature regimes, light and dark conditions, with higher inhibition in NaCl than PEG-6000. Recovery of germination and viability of seeds were lower in NaCl than PEG-6000 both in the light and dark. Moderate alternate temperatures (20/30°C) and 12-h photoperiod were found to be the optimal for seed germination and recovery. Better seed germination of *S. heterophylla* when osmotic potential caused both by NaCl and PEG 6000 is lower, temperature regime of 20/30°C and light regime is for 12 h.

Biography

Abdul Rahman A. Alatar has completed his Ph.D. at the age of 39 years from King Saud University (KSU), Saudi Arabia, Riyadh and got trained on molecular techniques from Department of Molecular Biology and Biotechnology, Sheffield University. Presently he has been working as an Associate Professor in Department of Botany and Microbiology and also he is a Vice Dean for Deanship of Student Affairs, King Saud University, Riyadh. He has 8 years' experience in both teaching and research activities. He has participated in several International, National conferences, symposiums, workshops. He has published more than 20 papers in reputed national, international and ISI journals and serving as an editorial board member of reputed journals and also has lifetime membership of Biology associations in worldwide.

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