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Salinity induced growth in sunflower (*Helianthus annuus* L.) cv. suntech-85

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An experiment was conducted at Department of Botany, Gandhi Faiz-E-Aam (P. G.) College, Shahjahanpur (U. P.) India in earthen pots to assess the adverse effect of salinity on growth parameters of sunflower (*Helianthus annuus* L.) cv. Suntech - 85. The result revealed that higher levels of salinity concentration (viz. 10, 15, 20, and 25 E. C.) were deleterious to plant growth, meanwhile, the lower salinity level of 5 E. C. does not show any adverse effect rather there was slight increase in all growth parameters as compared to control (DW). Whereas, higher salinity level with 25 E. C. was deleterious and showed a decrease of 20.96, 39.92 and 22.44% in shoot length, 35.93, 33.33 and 31.50% in root length, 56.46, 29.95 and 28.81% in shoot fresh weight, 42.42, 51.28 and 34.73% in root fresh weight, 30.26, 45.54 and 27.08% in shoot dry weight, 63.41, 55.00 and 57.29% in root dry weight and 44.82, 42.30 and 38.14% in leaf number and 41.56, 33.04 and 40.00% in leaf area as compared to control at 30, 60 and 90 DAS respectively. This decrease in growth at higher salinity levels might be due to the toxic effects of salinity, and plants growing in salinity may suffer from physiological aspects such as osmotic adjustment, drought stress, ion accumulation, mineral deficiency, reduced chlorophyll content and photosynthesis and altered reduced activities of some antioxidant enzymes such as SOD and CAT.

Biography

Sunil Kumar has completed his Ph.D. at the age of 28 years in 2008 from M. J. P. Rohilkhand University, Bareilly, India. During his Ph.D. work he got financial assistance as U. G. C. (JRF) from University Grant Commission, New Delhi. Presently, he is working as U. G. C. post doctoral fellow and part time botany lecturer at Department of Botany, Gandhi Faiz-E-Aam (P. G.) college, Shahjahanpur, Uttar Pradesh, India, affiliated to M. J. P. Rohilkhand University, Bareilly, India. He has published several research papers in reputed journals, attended several national level science conferences and international workshop.

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Effect on stage wise evaporation replenishment on physiological parameters and yield characters of papaya through drip system

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Papaya (*Carica papaya*), the tropical fruit crop with higher production potential, is gaining much economic significance in India for the last two decades. The increasing demand of fruits in domestic market and papain in the export trade has made papaya cultivation extensive. Drip irrigation technology permits the efficient use of water and can help maximize the use of semi arid lands for agricultural use and this technology is particularly suited to widely spaced crops as papaya. Irrigation through the drip at 6-8 lit/day/plant gives better yields. In the studies based on physiological responses of papaya (*Carica papaya*) to different levels of stage wise evaporation replenishment through drip system” was carried out under field condition. The variety Pusa Dwarf was subjected to various levels of 100%, 80%, 60%, 40% evaporation replenishment at different growth stages of the crop. Higher content of relative water content, soluble protein and chlorophyll stability index was observed. Thus expressed the higher response in nitrate reductase activity and catalase activity and photosynthetic rate and transpiration rate was carried out. In this study best yield and quality characters was also observed at all stage of the crop.

Biography

P Indhumathi has completed her M.Sc. (Crop Physiology) at the age of 24 years from Tamil Nadu Agricultural University and Ph.D. studies from Tamil Nadu Agricultural University. She also participated in two national seminars.

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