

Effects of Salinity Stress on Morphological and Physiological Characteristics of Miniature Rose (*Rosa chinensis* Jacq. var. *minima* Rehd.)

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Abiotic stresses are very harmful in plant species due to their extensive presence in agricultural lands and increase in the probability of their severity under climate change conditions. To investigate the effects of salt stress on some morphological and physiological characteristics of miniature rose (*Rosa chinensis* Jacq. var. *minima* Rehd.) cultivars a factorial experiment was conducted based on a completely randomized design in greenhouse conditions. Treatments were water with electrical conductivity of 2 and 4 dS m⁻¹ provided by NaCl along with tap water as control and rose cultivars including red (*R. chinensis* 'Little Buckaroo'), pink (*R. chinensis* 'Sourati Local Cultivar') and yellow (*R. chinensis* 'Little Flirt') flower plants. The results revealed that salinity of 4 dS m⁻¹ decreased the number of leaves and flowers, flower diameter, plant height, dry weights of shoots and roots, leaf area, chlorophyll index, chlorophyll fluorescence and visual quality while leaf ion leakage was increased. 'Sourati Local Cultivar' had the lowest plant height, flower diameter, dry weight of roots, visual quality, leaf area, chlorophyll index, and the highest leaf ion leakage in salinity treatments (2 and 4 dS m⁻¹), while in the control treatment this cultivar had the maximum number of leaves and flowers. 'Little Buckaroo' with the highest plant height, dry weight of roots, visual quality, leaf area, and chlorophyll index was the most tolerant cultivar to salinity stress. Therefore, its cultivation in areas with saline soils can be suggested.

Keywords: Abiotic stress, Electrical conductivity, NaCl, Visual quality.

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