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Comparison of Salinity Stress Tolerance of Two Pear Cultivars Harrow Sweet and Bartlett under *In Vitro* Conditions

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In the current work the salinity stress tolerance of shootlets of two pear cultivars Harrow Sweet and Bartlett was studied and compared under *in vitro* culture condition. Salinity stress was imposed into the QL medium using different concentration of NaCl (0 as control, 80 and 120 mM) for six weeks. Shoot length, fresh and dry weight as well as leaf numbers of the shootlets were negatively affected by salinity stress. However, these effects were more pronounced in shootlets of Bartlett than Harrow Sweet. The highest salinity injury index (SII) was observed at 120 mM NaCl in the value of 1.41 and 1.72 units in cultivars Harrow Sweet and Bartlett, respectively. The activities of both tested antioxidant enzymes, superoxide dismutase (SOD) and peroxidase (POD) enzymes were increased by salinity treatments. These activities at 120 mM NaCl were higher in Harrow Sweet than other ones. In terms of maintaining high proline and K^+/Na^+ contents in the leaf tissue, Harrow Sweet showed more favorable situation in comparison with Bartlett cv. Differential tolerance to the salinity stress, with the high amount in 'Harrow Sweet', was displayed in two pear cultivars based on the majority of evaluated criteria.

Key Words: Antioxidant, Potassium, Peroxidase, Proline, Stress, Culture medium.

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