

THE INFLUENCE OF SALT STRESS ON STOMATAL CONDUCTANCE OF BITTER CUCUMBER (*MOMORDICA CHARANTIA* L.)

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Abstract

Among the environmental stressors salinity is the main factor that calls into question the future of plant cultivation, be it agriculture, ornamental or medicinal plants. It currently affects almost a billion hectares of lands, of which 77 million hectares represent arable land. The intensification of stomatal conductance is directly correlated with the mechanical force involved in the opening of the stomata, which is influenced by the osmotic absorption of water, but also by the increase in hydrostatic pressure in the stomatal. This research was carried out in order to determine the bitter cucumber varieties with good resistance to salt stress. The materials used were represented by five varieties of bitter cucumber (*Momordica charantia*) of which: two Romanian varieties (Rodeo variety and Brâncusi variety) and three lines (Line 1, Line 3 and Line 4). The five varieties of bitter cucumber were subjected to salt stress for a 30 days period, during which they were constantly treated with saline solutions consisting of 100 mM and 200 mM concentration. Stomatal conductance was measured with SC-1 Leaf Porometer. The device is used to determine the flow of water vapor in and out of leaf stomata by inducing stomatal conductance.

Key words: bitter cucumber, salt stress, stomatal conductance