

MITIGATION OF SALT STRESS OF CAPSICUM THROUGH EXOGENOUS APPLICATION OF ASCORBIC ACID AND HUMIC ACID

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Executive Summary

An experiment was conducted in the net house of Horticultural Farm of Sher-e-Bangla Agricultural University, Dhaka, during the period from October 2022 to March 2023 to enhance the salinity tolerance of capsicum using ascorbic acid and humic acid. The treatments consisted of 3 different salinity levels viz., S_0 = Control ($\pm 0.7 \text{ dSm}^{-1}$) EC, S_1 = 4 dSm^{-1} EC and S_2 = 8 dSm^{-1} EC and application of ascorbic acid and humic acid viz., C_0 = Control (Water), C_1 = 150 ppm ascorbic acid, C_2 = 1.2g/l humic acid. The experiment was setup in a two factor Complete Randomized Design (CRD) with three replications. Data on different growth, biochemical parameters and yield contributing characters of capsicum was recorded. Considering the level of salinity, significant variation was recorded on yield per plant (g) of capsicum due to different level of salinity. The result of almost all parameters studied was decreased with the increase of salinity levels and this reduction rate was decreased by foliar application of ascorbic acid and humic acid. Considering the effect of salinity, the highest fruit yield of capsicum (932.94 g/plant) was found from S_0 , whereas it was the lowest (532.42 g) in S_2 . In the case of ascorbic acid and humic acid application, the maximum yield (919.68 g/plant) was recorded from C_2 , the second highest (757.56g/plant) was found from C_1 , whereas the lowest yield (473.02 g) was recorded from C_0 . Considering the result of all growth, yield and biochemical parameters, It can be concluded that, both ascorbic acid and humic acid was found to be effective to enhance salt tolerance of capsicum.

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