

**SELECTION OF SALT TOLERANT OKRA (*Abelmoschus esculentus* L.)
GENOTYPES BASED ON MORPHO-PHYSIOGENIC TRAITS
FOR SALINE AREAS**

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Executive Summary

The research work was conducted to find out okra (*Abelmoschus esculentus* L.) genotypes against salinity stress in net house, Department of Genetics and Plant Breeding, Sher-e-Bangla Agricultural University, Dhaka during the period of July 2022 to June 2023. This study was conducted with eight okra varieties such as special Dherosh Green Super (V₁), Dherosh Sobuj Sathi (V₂), Hira (V₃), Dherosh BARI-1 (V₄), Iron-40 Dherosh (V₅), OK 285 (V₆), Okra Soma (V₇) and Nice Green (V₈). Four salinity treatments viz. T₀ (control), T₁ (3 dS/m), T₂ (6 dS/m) and T₃ (9 dS/m) were applied to the varieties. Salinity treatment affected almost all traits of okra significantly. The tallest plant (77.25 cm) was found from V₄ whereas the shortest plant (45.79 cm) was found from V₇. The interaction effect of genotypes and salinity showed that the tallest plant (104.83 cm) was found from T₀V₄ whereas the shortest plant (35 cm) was found from T₃V₆. The maximum fruit weight per pod was found in V₃ (14.33 g) whereas the minimum fruit weight per pod (9.67 g) was found in V₇. The maximum fruit weight per pod (20.0 g) was found in T₀V₂ and T₀V₃ whereas the minimum fruit weight per pod (6.67 g) was found in T₃V₅ and T₃V₇. The maximum yield per plant (126 g) was found in V₈ which was statistically similar with V₆ (112 g) whereas the minimum yield per plant (54.00 g) was found in V₄. From the research findings, V₆ (Ok 285 okra), V₈ (Nice Green) suggested at mild to moderate saline prone area because it performed well under T₂ and T₃ treatment and V₂ (Dherosh Sobuj Sathi) and V₅ (Iron-40 Dherosh) could be suggested for moderate saline prone areas on the basis of maximum fruit weight per pod. Salinity stress adversely affects the physiology of okra at all stages of growth and development. Observation of morpho-physiological characters played important role for the selection of suitable genotype for future breeding purpose.

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