

“MITIGATION OF NaCl STRESS IN OKRA BY EXOPOLYSACCHARIDES PRODUCING ENDOPHYTIC FUNGI”

ABSTRACT

Endophytic entities are abundant in nature, with a wide range of bioactivity ranging from medicinal effects on animals to growth stimulating properties and stress tolerance activities in green plants. Endophytic fungi were gathered from the PMI lab at Abdul Wali Khan University Mardan for this investigation (Pakistan). Exopolysaccharide (EPS) was discovered in three strains from GR, 14n, and 19 these endophytes play an important role in eradicating drought stress in Okra seedlings when administered at NaCl stress levels of 100, 150, and 200 mm In contrast to non-EPS treated seedlings, the fresh weight contents of okra tissue (39%), total chlorophyll (33%), phenols (41%), and soluble sugar content (26%) increased. The drought resilience of Okra seedlings was reported to be at its peak when 100 Mm dose was administered. During the fermentation length (5 days), medium pH (6) in Czapek medium, IAA sources, phenols and flavonoids of 17.38 g/L, the chosen endophytes generated a spectrum of vital phytohormones and secondary metabolites. The current study indicated polysaccharides for okra growth promotion and potent in its function of drought stress resistance, which might improve the sustainable yield of okra in agriculture, places suffering severe salt stress for the first time.