Morphophysiological and yield attributes of groundnut varieties under different salinity stress conditions

ABSTRACT

The study sought to evaluate the response of three groundnut genotypes (Binachinabadam-3, Dacca-1 and Zhingabadam) to various salt concentrations (D0 – Control, D1 – 2.5 dS/m, D2 – 5.0 dS/m, D3 – 7.5 dS/m, D4 – 10.0 dS/m, D5 – 12.5 dS/m) through observation of morphological and physiological characters. Based on relative performance of yield contributing characters and nutrient contents of leaves and stem, Binachinabadam-3 emerged to be a tolerant variety and based on root shoot characters, Dacca-1 appeared as tolerant while Zhingabadam always performed as sensitive variety. Salinity treatments had most adverse effects at flowering stage and followed the trend of sensitivity as flowering stage > vegetative stage> pre sowing stage > pod filling stage. All varieties were found to be tolerant up to salinity level of 7.5 dS/m.

Keyword: Arachishypogaea; Oil crops; Salinity stress; Salinity tolerance