

THE INFLUENCE OF VARIOUS TYPES OF ROOT ENVIRONMENT SALINITIES ON THE GROWTH OF DIFFERENT PLANT SPECIES

M. Abdullah*, and M. A. Kahlown**

ABSTRACT

Saline soils contain varying amounts and proportions of ions of Na^+ , Ca^{2+} , Mg^{2+} , Cl^- , SO_4^{2-} . About 60 percent of the saline soils in Pakistan are saline-sodic or sodic in nature containing high proportions of Na^+ compared to Ca^{2+} and Mg^{2+} . The injurious salts commonly present in salt affected soils of Pakistan are NaCl and Na_2SO_4 , although MgCl_2 and MgSO_4 are also found in some places. Responses to salinity vary widely from soil to soil, plant to plant and from one salt type to another under field conditions. The presence of various kinds of salts in dominant amount in soil and plant systems bring about a series of physical, chemical, bio-chemical, morphological and physiological changes that profoundly influence the normal plant growth. The better understanding of such plant growth suppression factors due to presence of different dominant salt species in salt-affected soils will help the soil and plant as well as bio-saline scientists, biologists, plant breeders and bio-technologists to address the problem in better way. The literature available on this important aspect is enough but is scattered one. The research work conducted under various types of root environment salinities on different plant species is being discussed.