

# SCREENING OF MAIZE (ZEA MAYS L.) INBRED LINES UNDER DIFFERENT SALINITY LEVELS AT SEEDLING STAGE

**Maria Khan<sup>1</sup>, Maria Kausar<sup>1</sup>, Naeem Akhtar<sup>1</sup>, Sher Muhammad Shehzad<sup>1</sup>, Muhammad Arshad<sup>2</sup> and Muhammad Irfan Yousaf<sup>2</sup>**

<sup>1</sup>University College of Agriculture Sargodha, Pakistan

<sup>2</sup>Maize and Millet Research Institute-Yousafwala-Sahiwal, Pakistan

**M**aize is an important cereal crop and salinity is found to be major threat to sustainable production. Present study was conducted at Department of Plant Breeding & Genetics, College of Agriculture, University of Sargodha during spring season 2018 to evaluate 50 maize inbred lines in pots filled with sand under four levels of salinity (0 mM, 80 mM, 100 mM and 120 mM NaCl). Salinity was provided by irrigating the pots with NaCl solution of desired salt concentration while distilled water was used for irrigating control. Half strength Hoagland solution was used for the provision of nutrients. Germination test was conducted in the lab in the petri dishes by the provision of NaCl solution with desired concentration. Highest germination percentage at 0 mM, 80 mM, 100 mM and 120 mM NaCl was found as 89%, 81%, 76% and 72% respectively. Data was collected 28 days after sowing. Analysis of variance has shown a significant difference for genotype, NaCl levels and interaction effects among inbred lines for all the estimated traits. A significant difference was observed for no. of leaves plant<sup>-1</sup>, root length, shoot length, root dry weight, shoot dry weight, root fresh weight, shoot fresh weight, cell membrane injury, Na<sup>+</sup> content and K<sup>+</sup> content. Mean value for estimated traits in four treatments have contributed to discriminate salt tolerant lines from salt susceptible lines.

Mariak364@gmail.com