

**P-101 (201)****EFFECTS OF NACL-INDUCED SALINITY ON VEGETATIVE TRAITS OF TWO WILD ZIZIPHUS SPINA-CHRISTI (L.) GENOTYPES**

**Dr. Abdolali Hesami**, Department of Horticultural Science, College of Agriculture, Persian Gulf University, Boushehr, Iran; [alihesami4400@yahoo.com](mailto:alihesami4400@yahoo.com) (Presenting author)

**Dr. Malek Hossein Shahriari**, Department of Horticultural Science, College of Agricultural Sci. and Natural, Persian Gulf University, Boushehr, Iran; [mh.shahriari@pgu.ac.ir](mailto:mh.shahriari@pgu.ac.ir)

**Ms. Leila Bazdar**, Department of Horticultural Science, College of Agricultural Sci. and Natural, Persian Gulf University, Boushehr, Iran; [Leilam\\_fh@yahoo.com](mailto:Leilam_fh@yahoo.com)

Effects of salinization of soil on seedling growth, proline and some mineral accumulation of *Ziziphus spina-christi* (L.) were studied. Sodium chloride (NaCl) was added to the soil to maintain electric conductivity at 1.8, 5.8, 10.2 and 16.2 ds m<sup>-1</sup>. Seedlings were grown in pot under controlled greenhouse conditions. The experiment was designed according to Randomized Completely Block Design (R.C.B.D.) in a factorial experiment with two factors, i.e. four levels of NaCl (first factor), two genotypes (second factor) and four replicates for each experimental unit, this resulted in 32 factorial treatment (4 × 2 × 4). After 10 months, the results showed a significant decrease in all studied vegetative characteristics with increasing the salt concentrations. These reductions almost were predominance in genotype 2 than in genotype 1. Low levels of salinity (5.8 ds m<sup>-1</sup>) did not cause substantial inhibition of growth but increasing concentrations of salt induced a progressive decline in vegetative characteristics. Potassium and phosphorus, content in seedling leaves significantly decreased as soil salinity increased but an opposite impact occurred with increasing the proline concentrations. The proline also was significantly higher in the leaves of 'genotype1' than genotype2. The results imply the predominance of the genotype 1 in determining salt tolerance in comparison with genotype 2.

**Keywords:** Soil salinity, Seedling, proline content, Genotype, Potassiu