



## Effect of Soil Salinity on Growth, Yield and Nutrient Balance of Peanut Plants

Abd El-RheemKh. M.<sup>1</sup>, Safi-naz S. Zaki<sup>2</sup>

<sup>1</sup>Soils and Water Use Dept.,<sup>2</sup>Water Relations & Field Irrigations Dept., National Research Centre, Dokki, Giza, Egypt, Postal Code 12622

**Abstract:** A field experiment was carried out at El-Tina Plain in Ismailia Governorate during summer season of 2014, to study the effect of different levels of soil salinity on the growth and yield and content of nitrogen, phosphorus and potassium and its relationship with nutrient balance of peanut plants. Soil salinity levels were 6.3, 7.6, 8.8, 9.4, 10.6 and 11.8 dS m<sup>-1</sup>. All agricultural operations were similarly in all the different areas of salinity. Plant samples were taken and the values of crop in six different areas in soil salinity. Diagnosis and Recommendation Integrated system was used to determined nutritional balance. The results indicated that increasing soil salinity decreasing straw and grain yield by 47.7 and 53.6% respectively. While grain content of oil and protein decreased by 7.84 and 12.1 % respectively. Nutrient indices showed that increasing soil salinity decreased N and P in peanut plants, while potassium was not affected. So it must be interest to N and P fertilization under saline soil conditions.

**Key words:** Salinity, peanut plants, Growth, Yield, Nutrient balance.

Safi-naz S. Zaki *et al* /Int.J. ChemTech Res. 2015,8(12),pp 564-568.

\*\*\*\*\*