



Alleviating Salt Stress in *Thymus capitatus* plant using plant growth-promoting bacteria (PGPR)

Soha E. Khalil

Water Relations & field Irrigation Dept., National Research Centre, 33 El-Tahrir St.,
Dokki, Giza, Egypt.

Abstract : This study is to evaluate the effect of Plant-Growth Promoting bacteria (PGPR) (*Azospirillum lipoferum* and/or *Bacillus megaterium*) on *Thymus capitatus* L. grown under saline irrigation conditions (control (fresh water), S1 = 3.13 dSm⁻¹ and S2 = 6.25 dSm⁻¹). The experiments were conducted under normal environmental conditions during winter seasons of 2014 and 2015 at the green house of the National Research Center, Dokki, Cairo, Egypt. The analysis of the data collected during the study indicated that there were statistically significant increases in plant growth, yield, photosynthetic pigments and some chemical contents of thyme plant with different PGPR treatments especially under saline irrigation, which revealed significant decreases in the previously mentioned characters. While reverse trend was obtained for proline content, which increased significantly by increasing salinity levels and revealed significant decreases with all PGPR treatments.

Key words: Salinity, PGPR, growth, yield, total carbohydrates, Proline, photothynthetic pigments, RWC%.

Soha E. Khalil /International Journal of ChemTech Research, 2016,9(9),pp 140-155.
