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Nowadays, In Egypt there is an increasing pressure on the growers to utilize moderately saline irrigation water as the demand of good quality water increase and the reduction in drainage water volumes became desirable. In addition, a great part of the new reclaimed soils of the Egyptian desert is considered salty lands.

Therefore, the prudent use of these soils or water require a better understanding of how the plants respond to salinity at the different stages of growth. Investigations dealing with the effects of salinity on plants have been rapidly increased since the last few years. Many studies involved the artificial salinization of nutrient solution or sand cultures **(Munns and Termaat, 1986; Cheeseman, 1988; Maas and Grieve, 1990; Rizk, 1993** and many others).

It is well known that the salt tolerance of plants differs not only among species, but also changes during their growth and development **(Maas and Hoffman, 1977)**. Therefore, in order to efficiently utilize salt-affected soils and waters, it is now essential to determine the tolerances of different crops at specific growth stages.

In general, salt-induced growth suppression is a major obstacle facing crop production on saline lands **(Greenway and Munns, 1983)**. Also to date the exact biochemical and biophysical processes limiting growth is still unclear **(Munns and Termaat, 1986)**. However, considerable studies have been conducted on the salt tolerance of various bread wheat cultivars during the past 30 years **(Francois *et al.*, 1986; Maas and Poss, 1989 and Maas and Grieve, 1990)** and additional researches are needed. Also, some preliminary studies on the salt tolerance of tomatoes have

been conducted in small pot cultures (**Gronwald *et al.*, 1990**). Hence the objective of the present study is to clarify how wheat and tomato plants respond to saline conditions including the differences between the more salt-tolerant and the less salt-tolerant cultivars.

In addition, the lack of salt tolerance information in relation to the endogenous levels of the phytohormones that prompted the author to include the hormonal status under saline conditions in the present study. Furthermore, the present study also included the possibility of increasing the ability of wheat and tomato plants as well to withstand the saline conditions through the usage of paclobutrazol as a new and effective growth regulator.