1- INTRODUCTION

Land reclamation projects in Eastern and Western deserts in Egypt occupy a very important sector in the programmes of Agricultural development for increasing the cultivated area . Beside, irrigation in these areas depends mainly on under-ground water which sometimes includes high amounts of salts . Therefore , for the success of these projects , it is very important to study water quality through investigating the chemical composition of the water resources , as well as , fruit species and rootstocks that can tolerate salinity.

According to the census of 1987 * in Egypt, the area planted with citrus reached 269538 feddans from 616174 feddans of the total fruit area . Due to the large area of citrus it is considered the most important fruit crop . Moreover, a considerable portion of citrus acreage is in the newly reclaimed soils i.e. El-Tahreer province , Mariout Sector and other areas on both sides of Nile valley .

In addition, salinity has a great role in the absorption phenomenon of plant roots which should be reflected on the behaviour of any particular crop with respect to physiological and metabolic activities .

In Egypt, sour orange is the most preferable rootstock for citrus in spite of its suceptibility to Tristeza virus and burrowing nematode as well as its limited tolerance to salinity . Thus, a trial was carried out to find other alternative rootstocks which may have ability to tolerate salinity .

Accordingly , the present investigation was conducted to study the effect of salinity and S A R levels on growth of young Washington navel orange plants budded on some different citrus rootstocks i.e. Rangpur lime , Cleopatra mandarin and Poorman orange beside the common used sour orange stock .

Meanwhile , a general evaluation for citrus rootstocks was carried out that may contribute to the selection of the most tolerant rootstock for high level of salinity and S A R under either full sun light or partial shade conditions

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** According to statistics of the Ministry of Agriculture , Egypt ; 1987 (Under publication)*