INTRODUCTION

I. INTRODUCTION

Olive is one of the oldest cultivated tree crops in the history of the world about 8000 years ago. It was originated in the ancient times in the eastern side of the Mediterranean sea. Olive has speard to all the countries around the Mediterranean basin, which is still the major region of olive production until today.

Olive tree (*Olea europaea* L.) belongs to the family Oleaceae. It can thrive and produce in new reclaimed areas where other crops can't grow. Beside, the nutritional importance of olive fruits, either as a table or for oil production. Hence, olive areas increased rapidly in Egypt and reached about 117886 feddans, which in turn produced about 336442 metric tons of fruits in the 2003 year according to the statistics of Ministry of Agriculture vol. (2).

Although olive trees can survive and grow under low soil fertility and water availability conditions, many research studies have been indicating that improving soil fertility and satisfying water requirement are essential factors to obtain a high production. However, increasing olive tree productivity under desert conditions must be based on appropriate technical and economic management to the natural resources scarcity.

Biofertilization are biological preparations containing primarily patent strains of micro- organisms in sufficient numbers. These micro- organisms have definite beneficial roles in the fertility of soil rhizosphere and the growth of seedlings. The multi- strain biofertilizers might contain different starins of symbiotic associative diazatrophes, phosphate- solubilizing micro- organisms, silicate dissolving micro- organisms, blue green algae and VAM

(Saber, 1993a). Biofertilizers proved to eliminate the use of pesticides sometimes, and rebalance the ratio between plant nutrients in soils. They are easy and safe to handle with field applications improved their efficiency in increasing crop yields and decreasing the costs of some agricultural practices. It is worthy to state that biofertilizers do not replace mineral fertilizers, but significantly reduce their rate of application **(Ishac, 1989 and Saber, 1993 b).**

Biofertilizers are very safe for human, animal and environment. Since they reduce at the lower extent the great pollution happened in environment. Phosphorene is a biofertilzer product containing active microorganisms hydrolysing the insoluble phosphate into soluble one under high soil pH and greater percentage of calcium carbonate, consequently partially overcome the phosphate fixation. In addition, Rhizobactrine as new biofertilizers have greater amount of symbiotic bactria responsible of Symbiotic and no symbiotic bacteria responsible for fixation nitrogen. Application of them achieved the following merits: 1- Reducing plant requirements of nitrogen by 25%. 2- Improving the availability of various nutrients for plant absorption. 3- Increasing the resistance of plants to root disease. 4-Reducing the environmental pollution induced by the application of chemical fertilizers. 5- Imporving the productivity of the trees.

A variety of biofertilizers are now available commercially. Specific strains are used as biological fertilizers, for nitrogen, phosphorus and silicate dissolving such as N-fixing bacteria and yeasts. The use of these matierals encourages yield and keeps the environment clean.

The present study aimed to throw some light on the beneficial effect of soil and foliar application with N, P & K as well as to some biofertilizers namely, phosphorene, Rizobacterin,N evetrine and biostimulant (Biomagic) on growth and nutritional status and olive juvenile phase grown in sandy soil.