



## 1- INTRODUCTION

Globe artichoke (*Cynara scolymus*, L) is considered an important vegetable crop in Egypt due to its special nutritive and medical values. Also, it gained a highly exportable importance to the European markets. The immature flower bud (head) is the edible part which includes the fleshy receptacle and fleshy tender basis of bracts. It is, really , good source of crude protein, amino acids, crude fiber, reducing and total sugars and many minerals such as (N, P, K, Ca, Mg, Fe, Cu, Mn and Zn (**Lattanzio *et al.*,1981**). In addition, it has a high medicinal values (**Hammouda *et al.*, 1993**). Furthermore, it has a high content of storage carbohydrates as inuline. On hydrolysis, inuline yields fructose or fruit sugar which is of dietary value to patients with diabetes (**Thompson and Kelly, 1957**).

Globe artichoke is an annual plant, also grown perennially in many commercial areas. When grown from seed as well as by vegetative propagation, it produces a rosette of leaves followed by the growth of a flower stem. The roots and the underground part of the stem become fleshy and form a storage organ. After flowering, the rosette dries and dies. Thus, a healthy and proliferate plant canopy is very important for high yield and head quality.

The climatic requirements for optimum growth of artichoke plants are available in Egypt especially in the Behira Governorate which is considered the major center of production in Egypt, about twenty-five thousand feddan were planted by

artichoke in Egypt during 2011 and produced approximately 252 thousand tons. So, the average yield per feddan was 10.5 tons\*

The majority of production is obtainable usually during March and April months (**Abd El-Al and Moustafa, 1973**) while the optimum time for export to the European markets is during the period from December to February. So, these months are the most profitable for either exporting or local markets.

The yield quality of globe artichoke is judged by propagation materials (stumps, offshoots and ovoli) and agricultural practices. Nowadays, the use of growth stimulants and antidiseases substances were the most ultimate in production of artichoke especially for exportation in addition to reduce mineral fertilizers application and environmental pollution. In addition growth stimulants and antidiseases substances began to flourish as it is to reduce diseases, reduce pollution and has positive effects on plant stand, vegetative growth, yield and its quality. Salicylic acid, garlic extract, yeast extract, borax and antifungi are among such substance.

There for, the present study aimed to investigate the effect of propagation materials alone or combination along with yeast extract, garlic extract, salicylic acid, borax and antifungi mixture on plant stand, vegetative growth, flowering behavior, flower head yield and quality of globe artichoke.

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