Introduction

Tuberose plants (*Polianthes tuberosa, L.)* belong to the family Agavaceae, according to ***Hamlyn (1972).*** Tuberose is the common name for *Polianthes tuberosa*, a Mexican herb that forms a fleshy, bulb-like root stock or tuber (hence the name). The top part of this stock is covered with the broadened bases of the old leaves. From its short, rosette-like growth of spear-shaped grass-like foliage arises a solitary flower stalk which bears in summer and autumn many waxy white, funnel shaped, usually double flowers, with an intensely sweetish odor. The bulb that has flowered is often worthless the next season and the many small bulbs that it produced must be grown on for another year under favorable conditions in order to attain flowering size.

Polianthes tuberosa (Fam. Agavaceae) is a fine bulbous plant, which may be found in flower throughout the warm seasons through successive planting. The blooms are white and extremely showy, in large racemes about 80-110 cms. They are powerfully scented and the source of tuberose flower oil, used in high grade perfumery. The pear is an improved and shorter cultivar. No wild form similar to the *Polianthes tuberosa* of commerce is known but the plant grown was described by linnaeus and is probably Mexican.

In Egypt, the production of cut flowers is rapidly increasing either for local markets or export. Tuberose plants play an important role in this concern, because the blooms are extremely showy with pleasant odor flowering arrangement bouquets and also into vase decoration. The root stock of plants grow successfully without problems throughout the warm season. However, the plants are propagated in March by underground

root stocks known as bulbs, and flowering during June to August. The plant produces numerous bulbs and bulblets surrounding the mother bulbs forming the clumps producing second flowering flush during November.

In order to prolong the period of tuberose flowering, however, the consecutive planting dates were suggested every two months, storing the mother bulbs was studied to investigate the best conditions of storage.

The experiments herein included the effect of bulbs storing in the room temperature or by cooling. The stored bulb were grown with or without intercropping of (*Tagetes erecta*).

The study also included the effect of foliar application of both growth substances GA_3 and PP_{333} on the growth, flowering and chemical composition of tuberose plants. The second flush was reported.