بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

PHYSIOLOGICAL STUDIES ON *Polianthes tuberosa* AND *Ornithogalum thyrsoides* BULBS

By

Salah Abd El-Aziz Goma

B.Sc. Agric. (Hort.), Ain-Shames Univ., 1969
M.Sc. Agric. (Flor.), Minia Univ., 1979

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ABSTRACT

Two sets of experimental trials were consummated as the first aimed to study the independent as well as the combined effects of different types of storage (ambient temperature at 28+3C and cold storage at 5C) and GA_3 treatments (0, 125 and 250 ppm) on growth, flowering, bulbs productivity and chemical constituents of *Polianthes tuberosa* L., it was concluded that cold storage treatments for 15 days or GA_3 rates extended the flowering season with improving the vegetative growth and flowering characteristics. Cold storage increased rachis length and insignificantly decreased fresh weight of bulbs. Room storage treatments as well as GA3 increased soluble sugars in produced bulbs. Cold storage or GA3 treatments increased N,P and K in both leaves and bulbs.

The second trail was performed to study the effect of growing media (clay, composted and sand/composted leaves) and NPK fertilizers at 15 and 20g at the ratios of 1:2:1 of ammonium sulphate, calcium superphosphate and potassium sulphate on growth, flowering and bulbs production of *Ornithogalum thytsoides* Jacq., It was concluded that both composted or sand/composted leaves as well as NPK improved vegetative growth, flowering characteristics without any reduction in fresh weight of bulbs or bulblets yield. The two rates of NPK and sand/composted leaves increased soluble and insoluble sugars, nitrogen, phosphorus and potassium in produced bulbs. Meanwhile, K% in leaves increased in both sand/composted and clay medium.

APROVAL SHEET
PHYSIOLOGICAL STUDIES

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By

Salah Abd El-Aziz Goma

This Thesis has been approved by:

Prof. Dr. Fardous Menesy

Prof. Dr. E.M.S. Nofal

Prof. Dr. El-Saady Badawy

Prof. Dr. El Sayed El Mahrouk

Committee in charge

Date: 5 / 4 / 2000

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INTRODUCTION

INTRODUCTION

Ornamental flowering bulbs are very popular for local market and exportation. Under local conditions, there are many important problems facing the production of flowers and bulbs, such as the short blooming season, which may not exceed three weeks for most ornamental bulbs, the less flowers yield and quality, the deterioration of bulbs productivity year after... etc. However, the advanced techniques offered the possibility of solving some problems, especially in recent years. For this purpose two ornamental flowering bulbs were chosen

Polianthes tuberosa L. Family. *Agavaceae*, is bulbous plant, native of Mexico. The flowers are pure white and highly scented, when detached singly they are useful for buttonholes and bouquets **Fred and Crittenden,(1956).** The plant is very attractive with silvery white color fragrance spikes and long vase-life. There are two main flowering duration of the plant under local conditions, the main is in summer and the return crop production in autumn which is more important because of high profits as a result of the lack of flowers available in the local market throughout such duration. However, the short blooming period through autumn represents the main problem facing the production of such crop in Egypt.

Using growth regulating substances for regulating the physiological behavior of the plants, especially ornamental bulbs, became a subject of extensive studies in recent years. Moreover, it is well known that storage temperature and duration are from the most important factors that affect the physiological pattern, anatomical behavior and morphological traits of many ornamental bulbs.

Therefore, the investigation presented in this Thesis (part1) was designated aiming to find out producing *Polianthes tuberosa* L. flowers throughout long duration of autumn, and early winter by studying the