

**STUDIES ON GROWTH AND FRUITING  
OF FLAME SEEDLESS GRAPE CV.**

BY  
**ASHRAF MAHMOUD HASSAN EL- KERAMY**

B.Sc. Agric., Horticulture, Ain Shams Univ. 1991

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Approval sheet


STUDIES ON GROWTH AND FRUITING  
OF FLAME SEEDLESS GRAPE C.V.

BY

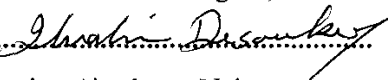
ASHRAF MAHMOUD HASSAN EL-KERAMY

B.Sc. of Agric.Horticulture, Ain shams Univ., 1991

This thesis for M.Sc. Degree has been approved by :

Prof.Dr. Moustafa, A. M. El-Hammady.....

Prof. of Pomology, and Vice Dean of Fac. Agric., Tanta Univ.

Prof. Dr. Ibrahim, M. Desouky.....

Prof. of Pomology, Fac. Agric., Ain shams Univ.

Prof. Dr. Assem, D. Shaltout.....

Prof. of Pomology, Fac. Agric., Ain shams Univ.

(Supervisor)

Date of Examination : 13 / 12 / 1995



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BY  
**ASHRAF MAHMOUD HASSAN EL- KERAMY**

B.Sc. Agric, Horticulture, Ain Shams Univ. 1991

Under the Supervision of :

Prof. Dr. Abd El-Azim M. El-Hammady  
Prof. of pomolgy, Dept. of Hort., Fac. of  
Agric.,Ain Shams Univ.

Prof. Dr. Assem D. Shaltout  
Prof. of pomolgy, Dept. of Hort., Fac. of  
Agric.,Ain Shams Univ.

Dr. Nazmi Abd El-hamied,  
Associate porf. of pomology, Dept. of Hort.,  
Fac. of Agric., Ain Shams Univ.



## ABSTRACT

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This work involved two parts. The first one was carried out to study the effect of dormex (hydrogen cyanamide) and Potassium nitrate ( $\text{KNO}_3$ ) as a dormancy breaking materials on Flame Seedless grape.

The obtained results showed that all dormex treatments had a superior effect on increasing bud break, reducing duration and days required to bud break than  $\text{KNO}_3$ , with no significant differences between concentrations (3,4 and 5%). Dormex and  $\text{KNO}_3$  treatments had no effect on leaf area and total chlorophyll content.

The best time of application to obtain an early yield without decreasing fruit quantity and quality was 7 weeks before expected normal bud break under the conditions of this experimentes, cluster and berry quality was improved by early application of dormex and this effect tended to decline as the time of applicatin advanced.

The second part of this study was desinged to examine the effect of  $\text{GA}_3$  at 5,10 and 15 ppm applied before flower opening and /or followed by  $\text{GA}_3$  and / or NAA at 20, 40 ppm after fruit set.

The obtained results showed that spraying clusters of Flame Seedless grape with  $\text{GA}_3$  before flower opening increased cluster length and weight, berry torus diameter, brush length, weight of 100 pedicel, berry firmness, weight of 100 berries, berry diameter and length, shelf life, T.S.S., acidity and anthocyanin content and decreased cluster compactness, berry adherence strength, acidity and number of berries but didn't affect perentage of shot berries.

Treatments with  $\text{GA}_3$  before flower opening and after fruit set hastened the previous effect of  $\text{GA}_3$  especially where  $\text{GA}_3$  was used at 40 ppm, on the contrary spraying NAA only or in



combination with GA<sub>3</sub> after fruit set to cluster received GA<sub>3</sub> before flower opening resulted in undesirable clusters due to high percentage of shot berries and straggly looses clusters.

It seems that the best clusters and berry quality was obtained with treatment of 5 or 10 ppm GA<sub>3</sub> before flower opening followed by 40 ppm GA<sub>3</sub> after fruit set .

#### **Key Words**

- Grape , Flame Seedless , Dormex , KNO<sub>3</sub>, NAA , GA<sub>3</sub> , bud break , fruit quality , yield .

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