STUDIES ON GROWTH AND FRUITING OF FLAME SEEDLESS GRAPE CV.

BY

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

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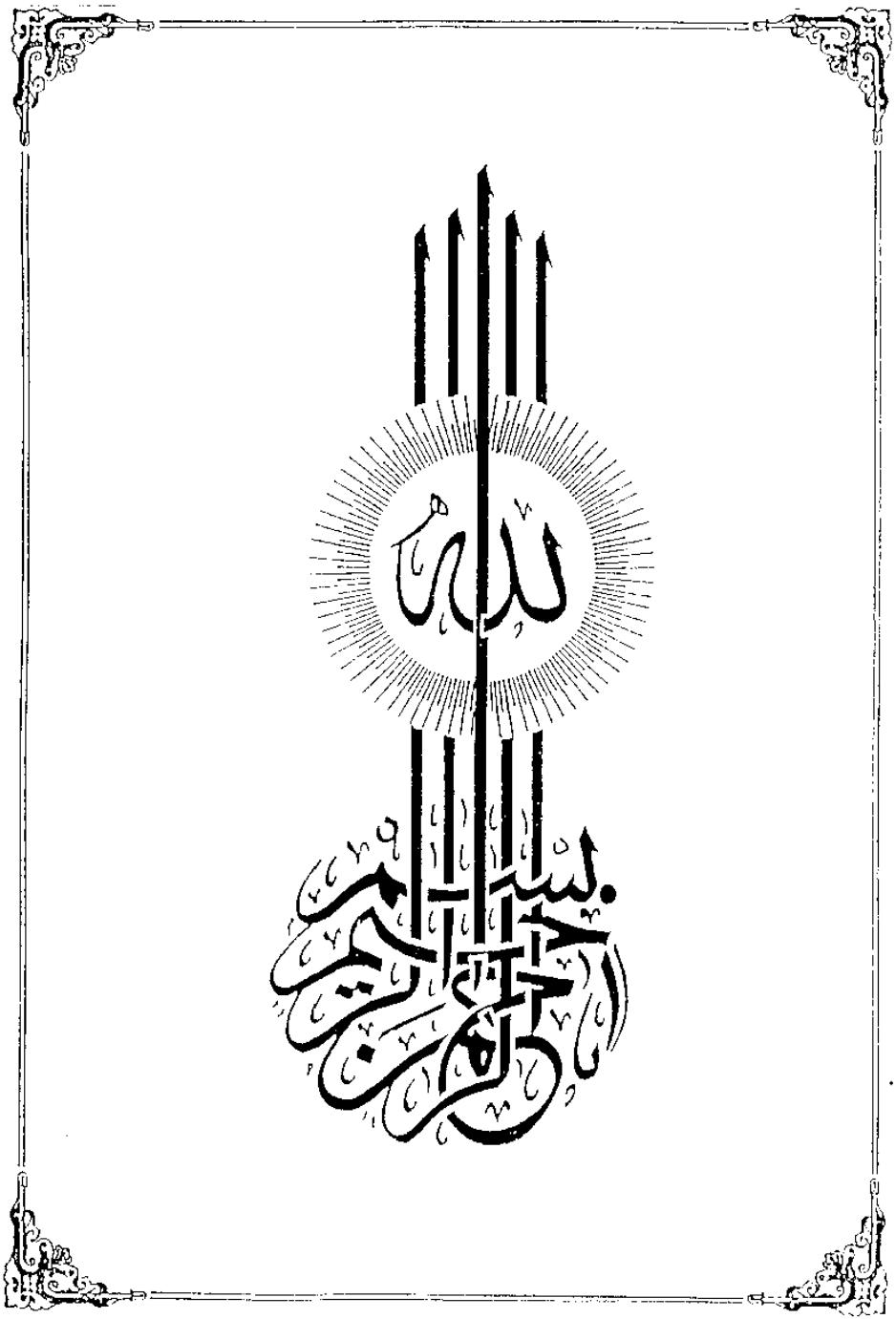

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ABSTRACT

Ashraf Mahmoud Hssan El-Keramy, Studies on growth and fruiting of Flame Seedless grape cv. Un published Master of Science,Ain Shams University Faculty of Agriculture, Horticulture Department 1995.

This work involved two parts. The first one was carried out to study the effect of dormex (hydrogen cyanamide) and Potassium nitrate (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 KNO_3, with no significant differences between concentrations (3,4 and 5%). Dormex and 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 inproved 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 GA_3 at 5,10 and 15 ppm applied before flower opening and /or followed by GA_3 and / or NAA at 20, 40 ppm after fruit set.

The obtained results showed that spraying clusters of Flame Seedless grape with 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 GA_3 before flower opening and after fruit set hastened the previous effect of GA_3 especially where GA_3 was used at 40 ppm, on the contrary spraying NAA only or in

combination with GA_3 after fruit set to cluster received GA_3 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_3 before flower opening followed by 40 ppm GA_3 after fruit set .

Key Words

- Grape , Flame Seedless , Dormex , KNO_3 , NAA , GA_3 , bud break , fruit quality , yield .

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