Faculty of Agriculture
(Saba Basha)
Plant Production Department

Effect of Moringa extract, Sitofex, Potassium and Calcium on yield and quality of "Thompson Seedless" grapevine

In

Agriculture Science (Horticulture - Pomology)

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Presented by

Mohamed Mahmoud Saad Felifal

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

- % (W/V) = (Weight of dissolved in grams (Ca $(No_3)_2$/ Volume of solution in milliliters) * 100

- 10 g calcium nitrate/ 1000 ml water= 1%

- Cost calcium nitrate at 1% per one feddan= (0.01 kg Ca $(No_3)_2$ * 500 L water) = 5 kg Ca $(No_3)_2$ * 42 (L.E.) = 210 (L.E.)

CHAPTER 5

5. SUMMARY AND CONCLUSION

The field experiment was achieved out during successive seasons of 2015 and 2016 on 15 years old, "Thompson seedless" grapevine grown at a private farm in Gharbia government, Egypt. The vines were planted in loamy clay soil under a surface irrigation system at 1.5meter in row and 3meters between rows. The vines were trained cane under three wires trellis system during January of each experimental season. The tested vines were pruned to 4 canes with 12 eyes each along with 6 renewal spurs. The total bud load was 60 buds. All vines received the same normal cultural practices management as recommended by the Ministry of Agriculture and Land Reclamation for grapevines were done. The vines were well established healthy and uniform as possible in both vigor and crop load. This study was arranged as Factorial experiment in randomized complete block design, since contains Foliar applications of water, Potassium sulfate at 2.5%, Calcium nitrate at 1%, Sitofex at 6ppm (CPPU), and Moringa leaf extract at 2.5% and Moringa leaf extract at 3.5% were used as a spray application either single or in a combination of them on the vine as an attempt to develop growth, cluster and berry quality and enhancement productivity of "Thompson Seedless" grapevine.

Foliar spray treatments of K and Ca were conducted at the veraison stage (changing berry color from green to yellowish-green- berries became nearly soft), foliar sprays were caver all vegetative growth of vines. However, the application of Sitofex at 6ppm was done at 4mm of berry diameter through foliar spray on clusters only. Foliar spray of Moringa leaves extracts were applied on all vegetative growth of vine at two times (at 20cm of shoot length, and 4mm of berry diameter). One hundred forty-four trees uniform in vigor as possible were randomly selected to study the effect of moringa leaves extract, Sitofex, potassium sulfate, and calcium nitrate on yield and quality of "Thompson seedless" grapevine. The experiment consisted of sixteen treatments arranged as Factorial experiment in randomized complete block design, each treatment includes three replicates, each made of three vines.