

1- INTRODUCTION

I. INTRODUCTION

In Egypt grapevines production ranks first among deciduous orchards. The total area cultivated with grapevines reached 137231 Feddans according to the statistical data of the (Horticulture service office in 1996). The most locally widespread table grape is Banati (Thompson Seedless) (Vitis vinifera L.)

There are many problems that the production of grapes in subtropical regions and temperate zones of the world such as in subtropical, we noticed that a considerable number of grape buds fail to grow due to the insufficient Winter chilling, while in temperate zones grapevines may be suffer from spring frost, various cultural practices have been successfully used to overcome these problems.

Nevertheless, these practices are laborious, time consuming expensive and may depress the vine vigour.

Furthermore the growers wanted to produce early high priced Thompson Seedless grape for local consuming as a table grape and to export to European Countries.

Recently various chemical compounds have been found useful to terminate dormancy of minimally chilled grape buds and other which can be delayed budburst in Spring to avoid Spring frost.

Such as Dormex (H_2CN_2) which led to earlier and more uniform budburst, earlier flowering and early fruit ripening, while GA_3 or NAA delayed budburst and berry ripening.

The present investigation was outlined to study the response of Thompson Seedless grapevines to some growth regulators and nutrient elements i-e Dormex (H_2CN_2), GA_3 , NAA KNO_3 , ZnSO_4 and urea applied at different concentrations and different dates on one year old wood after pruning at dormant season to determine the proper concentrations and date of spraying of Dormex, GA_3 pertaining the effect of these treatments on phynological phases, buds contents of free amino acids, total non-soluble and soluble sugars, bud behaviour, yield and its quality.

Furthermore the application of KNO_3 Zn SO_4 and urea to substitute of the above growth regulators which may be harmful for humen health.