

## I. INTRODUCTION

Grape cultivation began in Asia minor which consider the home of "*Vitis vinifera*" from which all the cultivated grape varieties were derived before the discovery of North America (Winkler, 1965).

The grape is as old as that of man and is intermingled with it; details of grape growing of figure in mosaics of fourth dynasty of Egypt (2440 B.C) and later the grape as commercial crop is assuming increasing importance. In addition; grapes are the world's biggest most widespread deciduous fruit crop. About one acre in every 125 cultivated acres in the world is in grapes and one person in every 100 works in more phase of the grape and products business. About 55% of the world grape production goes into wine and about 15% into raisins. The balance is grown mainly for the table grapes, juice and other products. The vinifera grape is predominate (Childers, 1983). According to the statistics of FAO in 1989 the total acreage of grape vine was about 8, 424, 000 hectares which produced 59, 158, 000 metric tones of fruits.

Nowaday, in A.R.E, grapes are considered the second fruit in Egypt. The total area increased in last few years under the new land reclamation and different soil types, its total area reached about 118826 Feddans produced about 786968 metric tons according to the last statistics of the Ministry of Agriculture in, 1994. In addition plans are developed to establish new grape vineyards with some imported/desired cultivars on new reclaimed soils such as sandy or calcareous soil. Therefore, many problems are expected to arise. These problems would be related directly to the relative adaptability of various cultivars and some culture practices used in such soils.

Grapes are influenced by soil type, mainly nutrition. In others words some transplants can absorb more macro or micro nutrients even under low nutrition level. On the other hand, nutritional problems related to