

INTRODUCTION

Sugar beet is one of several forms of cultivated beets, all which are included in a single species, *Beta vulgaris*, L. (Chenopodiaceae family).

The diversity of plant form with this species is large, as it includes the familiar red or yellow table beet, leafy foliage beets such as chard, eaten as vegetables or salads greens and fodder beets or mangles, grown for cattle feed. Today sugar beet is one of the main sources of about 28 % of world sucrose production and over 495,000 tons beet sugar produced in Egypt. Thus, sugar beet took the second place after cane sugar.

Growing sugar beet area in Egypt became 168,000 Feddan in 2005 by mean of root yield 21.5 tons/fed, currently the annual consumption of sugar in Egypt amounts to be 2.3 million tons, while the production of sugar yield from sugar cane and beets 1.5 million tons **.

The white sugar from sugar beet became 27% from the whole production of total sugar yields in Egypt approximately, today. In order to narrow the gap between the consumption and production there are several alternative and cooperative for increasing local sugar production in Egypt.

Harvesting dates takes place during the period extended from of February to the end of June depending the ex-crops and the operating period of the factories) and environments conditions for each governorats (temperatures and humidity). Therefore, the effects of varying locations and harvesting dates and their interactions on the performance of sugar beet

** Sugar Crops Conusel Cairo-Egypt Unpublished data 2005

genotypes with emphasis on root and sugar yields to be vital importance.

The objectives of this study were to estimate stability of some sugar beet varieties under various environmental conditions to judge that of them could be best in yield and quality. In order to obtain consistently better yield and good quality, cultivation over a large scale of area should be well adapted to different environments. The phenotypic and genotypic stability parameters were estimated to recognize the stable sugar beet genotypes under different environments.