

## 1- INTRODUCTION

Guava "Psidium guajava, Linn." is probably the most important fruit of the family "Myrtaceae". It is believed to be native to the area between Mexico and Peru, from where it has spread to almost all tropical and subtropical countries of the world (Chandler, 1958). In Egypt, guava acreage occupies about **32,072\*** feddans with total fruit production of **168,927** metric tons, according to the statistics of the Ministry of Agriculture (1986).

The great importance of guava lies in its fruit which is considered as the cheapest and richest source of vitamin C, since it contains four to ten times that of orange fruits (Coit, 1945 and Godston & Chanin, 1946). Beside, the fruits contain small amounts of vitamin A & B<sub>1</sub> and B<sub>2</sub> with 11.6% carbohydrates, 0.6% oils and 1% protein (Godston and Chanin, 1946). Moreover, fruits are consumed either fresh or in jelly, jam and juice products (Popenoe, 1932). On the other hand, guava fruits ripen in between seasons, where other fruits are rare.

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\* Unpublished statistics of the Ministry of Agriculture Egypt, (1986)

As for horticulturists, guava is admired as being of low cultural requirements (Popenoe, 1932). For instance, the trees are successfully grown on various kinds of soil; sand, or very light sandy; rich or poor; dry or moist (Baily, 1960). Meanwhile, trees yield at a time when markets are nearly lacking from other fruits.

The vast majority of cultivated trees in Egypt are raised by seeds. As a result, trees vary greatly in vegetative growth, flowering, fruiting and fruit characteristics. Such variance could be overcome by propagating these trees vegetatively. Standard methods for the vegetative propagation of guava need to be developed. Consequently, this study was carried out to cover two parts:

#### **Part I:**

Selecting some trees with good characteristics from several trees of seedling origin planted in the orchard of Faculty of Agriculture, Moshtohor, Kaliobia Governorate. This was done through studying tree growth, leaf nutrients content, fruiting and fruit quality.

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**Part II:**

Regeneration by stem cuttings as vegetative tool for propagating and perpetuating the best selected seedling trees with the aim of producing horticultural clones.

We hope that such study may contribute to the improvement of guava production in Egypt, via producing good horticultural clones from trees of seedling origin.

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