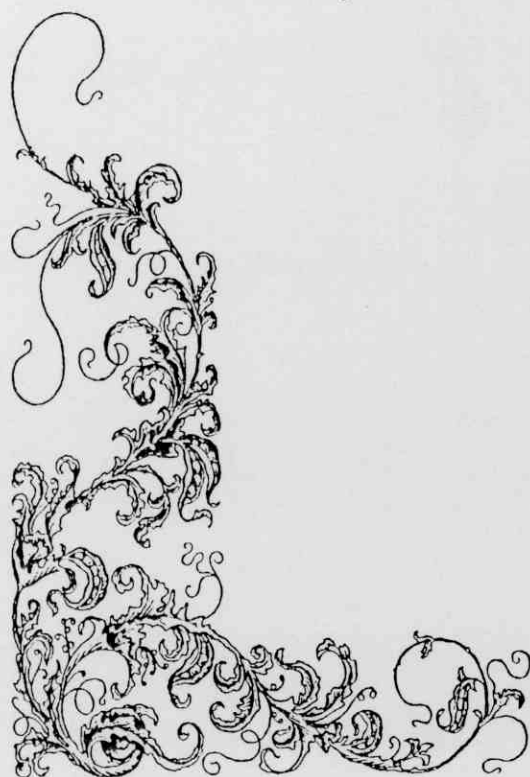


INTRODUCTION



1. INTRODUCTION

A great part of Egypt is covered by wide arid deserts, the cultivated land occupies about four percent of the total area. The olive tree *Olea europea L.* which belongs to the family Oleaceae, is considered as one of the most important crops which can be grown under difficult conditions especially salinity and drought. Accordingly, it is considered the suitable fruit species for plantation in desert and new reclaimed soils in Egypt especially Sinai, Northwestern coast and the New valley as well as Tushka. Olive trees include many cultivars which are used for oil extraction, pickling or for the double purposes.

Olive production plays an important role in the economy of many countries. It increases not only the land value where the soil was unsuitable for other crops, but also it contributes to soil conservation, especially in arid and semi arid regions.

According to the latest statistics of the Ministry of Agriculture in (2001), the area occupied by olive trees in Egypt was estimated by 108322 feddan and total yield is 3.84 (Ton/feddan).

The usual method for olive propagation in Egypt is by approach grafting. However, some difficulties accompanied this method such as the production of small quantities of plants and also the mother plants occupy a piece of land for a long time.

Recently, all these difficulties could be overcome through propagation by stem cuttings which is the most important and easy method for propagation. Such method has numerous

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advantages. It is inexpensive, rapid, simple and does not require the special techniques necessary in grafting or budding. There is no problem of compatibility with rootstocks of poor graft unions. Greater uniformity is obtained by absence of variations which sometimes appear owing to the variable seedling rootstocks of grafted plant.

This study was carried out on two olive cultivars (Manzanillo and Picual). The main aim of this study was to investigate the rooting ability of olive subterminal cuttings of both cultivars as affected by some treatments. This study was aimed also to investigate chemical components and anatomical examination of olive cuttings under research.