

## INTRODUCTION

Banana production occupies an important share in the total fruit production of Egypt. The total area of banana reached 34319 Feddans in 1992 \* which represents about 5% of the total fruit orchards that amounted to be 684701 Feddans. The total banana production in the same year of statistics was 421952 tons with an average of about 12.3 tons per Feddan. This rate indicates obviously a relative lower productivity level of banana in Egypt.

Among all banana farms grown in Egypt, Hindi is the most widespread cultivar, its area reached 20245 Feddans which representing about 60% of the total cultivars banana area. Moreover, Baradica and Maghrabi cvs. ranked second (5279, 4811 Fed., respectively). The average yield of the aforesaid three cultivars (11.4, 11.8, 12.0 tons/Fed.) for Hindi, Paradica and Maghrabi cvs., respectively.

Banana is considered as one of the most preferable fruits in the local market because of its best desirable eating quality for the Egyptian consumer and the absent

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\* Agricultral Census of 1992, Ministry of Agric., A.R.E.  
(unpublished).

competition from other fruit species "except citrus" cooler months. The deficit in market supplies is a logical result that reflects the declining productivity in most farms, which may be attributed mainly to the collapsing of the local cultivated banana clones and/or spreading of diseases, especially virus ones. In order to face such problem, efforts are directed at replacing such declined local banana cultivars with new introduced ones of those are increasing commercial importance such as Williams and Grand Nain (19.0 tons/Fed.).

Williams and Grand Nain cvs. belong to "AAA" Group, Cavendish Subgroup which includes four principal members, i.e., Dwarf Cavendish, Giant Cavendish, Grand Nain and Lacatan, after Simmonds and Shepherd (1955). Both cultivars are of relatively low height, they have been shown to yield more because of less losses from wind and also due to their shorter ratooning times. Besides, Stover (1982) proposed that Grand Nain should be the ideotype or model for breeding new dwarf varieties, since it outproduces other varieties, because it has less foliage system which is photosynthetically more efficient and greater proportion of the plant is converted to fruit than in taller varieties.