

# ***Introduction***

## 1. INTRODUCTION

Strawberry (*Fragaria x ananassa* Duch) is one of the most important herbaceous and perennial vegetable crops belonging to the rose family (Rosaceae) grown in Egypt. In last decades, fresh plantation, production and exportation are attributed to introduction of high yielding ability cultivars, early production as well as prolonging fruit shelf-life after harvest. In Egypt, most of the strawberry plantations are located in Kalubia, Ismailia, Sharkia and Behera governorates. Strawberry plantations at recent years, are progressing at a relatively fast rate especially in newly reclaimed desert lands. According to Annual Report of Agric. Statistics Dept. (2003), Agric. Res. Center, Min. of Agric., the total area planted with frigo annual planting system reached about 4000 feddans with an average of 9-10 tons/fed. In addition, the total area planted with fresh transplants on fumigated soil on raised beds mulched with plastic, reached about 1500 feddans with an average fruit production of about 16-18 tons/fed.

Strawberry fruit is perishable and its storage life is often ended by decay which is assessed as the storage disorder especially fungal diseases. Recently, great efforts have been made to improve strawberry production and fruit quality for both local consumption and exportation. Maintaining fruit quality and reducing post-harvest losses are considered as the most important means for increasing strawberry production. This could be achieved by using high yielding and better quality cultivars as well as follows advanced pre- and post-harvest techniques. In Egypt, many investigators studied the effect of calcium salts (El-Bassiony, 1992; Youness, 2002), UV-irradiation and biological control (Youness, 2002), fungicides and biocides (Khafagi,

2002) on regulation of fruit ripening and preventing the physiological disorders. Therefore, the aims of this study are to investigate the effect of some fungicides and bio-products as pre-harvest treatments on growth, yield and fruit quality of strawberry. Also, to elucidate the combined effect of such pre-harvest treatment with the storage temperature as post-harvest treatment on fruit quality and the storageability of the produced fruits.