

1-INTRODUCTION

Undoubtedly date palm (*Phoenix dactylifera*, L.) produces fruits of highly nutritive values. It is one of the oldest cultivated plants. In Egypt, date culture covers a large area from Aswan to Northern Delta, besides the oases of Siwa, Baharya, Farafra, Kharga and Dakhla as well as El-Fayoum Governorate.

Several efforts have been accomplished to improve date palm production through facing production problems and improving cultural practices, i.e., efficiency of pollination process, alternation of bearing and suitable fertilization program.

Date palm is a dioecious plant, i.e., male flowers and female flowers are borne on separate palms. The natural pollination process is dependent on the previously two mentioned agents, the palm cropping will be shy and the fruit may be of inferior quality due to inadequate pollination. Therefore, artificial (hand) pollination becomes a necessity as a mean to ensure high yield, particularly when male palms are far from female ones or not in the way. Moreover, it is well known that pollen grains from different male palms, i.e., pollen grains sources seems to affect date quality, i.e., date weight, colour, size, taste, flesh thickness and ripening (metaxenia). Consequently, the good choice of pollen grain source is of great importance from the productivity and fruit quality standpoint.

On the other hand, date palm tend to crop in alternation. Alternation of bearing which is proverbially marked in date palm is considered competition between vegetative and reproductive organs. This habit causes a great loss in annual farm return and adversely affect date quality. Regular cropping is desired, but rarely obtained would occur when a very delicate balance between fully vegetative and reproductive organs is achieved. Thereupon, as a point of view, fruit thinning is reported as a good tool to minimize alternation and somewhat stabilizing the cropping through maintaining proper