

# Greenhouse Rooting of Date Palm Offshoots Using an Inverted Mist System

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**Abstract.** The rooting percentage of small size date palm offshoots is rather low, so that their use in propagating is worthless. For this reason, they are discarded during the separation of the large offshoots. However, there have been several trials for rooting these offshoots using the overhead mist system. These trials were unsuccessful due to the decay of the meristematic heart (the main growing point).

This work was conducted during 1990/1991 season to evaluate the inverted mist system as a method for propagation Khalas offshoots of different weights. Also the different morphological stages of root formation on these offshoots were described.

It was found that rooting of small as well as large weight offshoots was achieved after four months. However, root number and growth was better as the offshoot weight increased.

Two types of roots were identified:

The first is cylindrical, non branched roots, originating from leaf axils. The second is smaller in diameter and branched, originating from the old roots that were present at the time of offshoot separation.

## Introduction

Date palm represent the most important fruit tree in Saudi Arabia. Besides being of importance for fruit production, it is also one of the main trees for ornamental and landscape purposes. Thus, there is always an increased demand for offshoots of superior cultivars.

Using offshoots for propagation of date palms is up till now the main method in order to insure true to type trees (Al-Bakr, 1972, Wally et al., 1979 and Al-Hag Said, 1989). It is usually recommended that the offshoots would not be less than 10 kgs and up to 25 kgs (Nixon, 1959, Toutain, 1966, and Khairy, 1983). Since the rate of success of small size offshoots to root is rather low, their use in propagation is worthless (Al-Bakr, 1972, Wally et al., 1979). For this reason, they are discarded during the separation of the large offshoots.