Energy Savings in Cutting Propagation Using a Floating System

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INTRODUCTION

The mist propagation system is very popular for the production of nursery stock, however, the maintenance of the water and electricity supplies and clean misting nozzles is very important. This report gives the results in energy savings of a trial of cutting propagation using a floating garden.

MATERIALS AND METHODS

A floating box with small holes in the bottom was filled with cutting compost and placed on the surface of a small pool. After setting the cuttings in the box, no overhead watering was given during the entire experimental period of three months. *Dendranthema, Luculia, Daphne, Rhodotypos, Camellia sasanqua,* and *C. japonica* were used for this experiment. After 2 months and 3 months from setting, the rooting frequency was recorded for about 20 cuttings from the floating and 10 cuttings from the control plot (a conventional cutting bed with overhead irrigation).

RESULTS AND DISCUSSION

Dendranthema, Luculia, and *Daphne* showed similar rooting frequencies after 2 or 3 months (Table 1). However, *Rhodotypos* showed no difference in either plot. *Camellia sasanqua* and *C. japonica* showed higher frequency of rooting in the control plot. So, the adaptability of the floating method of cutting production is limited to certain plants.This method would be useful for a small-scale propagation unit without any misting equipment.

Table 1. Rooting frequency in a floating propagation system.

	Rooting at 2 months (%)		Rooting in 3 months (%)	
Plant	Floating	Control	Floating	Control
Dendranthema	100	100	100	100
Daphne	100	100	100	100
Luculia	65	75	100	100
Rhodotypos	89	33	50	67
Camellia sasanqua	21	100	54	100
C. japonica	17	60	9	57