

PREVENTING DISEASES OF CUTTINGS OF *DRACAENA MARGINATA* LAM.

Two pathogens *Erwinia carotovora* and *Fusarium moniliforme*, are serious incitors of diseases

of cuttings of *Dracaena marginata* Lam. The experiments reported herein were conducted to find effective means of controlling these problems thus reducing the loss of cuttings during propagation.

The first experiment involved using 10 cm stem cuttings of *Dracaena marginata*. Cuttings were first treated with fungicide and then both cut ends of one-half of the cuttings were covered with an asphalt based pruning compound. Two methods of fungicide application, dip and dust, were studied. The three fungicides tested were Captan, Terraclor, Difolatan and an untreated control.

With the second experiment, ten 30 cm and ten 10 cm stem cuttings were used for each of 4 treatments. One of these treatments involved treating the stock plant from which cuttings were to be taken with benomyl systemic fungicide. Another treatment involved dipping the cuttings in Captan and Terraclor. A third treatment included both the pre- and post-cutting treatments. The fourth treatment was an untreated control.

A third experiment consisting of 10 treatments was conducted with only 30 cm cuttings. These treatments involved allowing the cuttings to cure and form a layer of periderm over the cut surfaces. In 5 of these treatments, the cuttings were cured in a controlled temperature chamber at 30 ° C. Cuttings from another 4 treatments were cured in an open greenhouse with temperatures between 15.5°C and 31°C. Some of these treatments received a post-curing fungicide treatment.

Table 1. The effects of disease preventive treatments on prevention of rotting of stem cuttings of *Dracaena marginata* Lam.

Length of curing period (days)	Captan treatment	Dip	Dust	Pruning compound	Percentage cuttings surviving without infection - month			
					1	1½	2	3
0	X		X		100			40
0			X	X	100			81
4	X	X			100		100	100
2	X	X			100		90	90
0 Control					80		30	30

With the first experiment, data were taken at 6 weeks and 3 months after treatment, and for the other experiments data were taken monthly over a 3 month period on the percentage of cuttings surviving without infection.

With the first experiment, at 6 weeks after striking the cuttings, Captan and Difolatan treatments showed significant improvement in survival over Terraclor and control treatments. Applica-

tion of fungicide as a dust was superior to the dip method. At 3 months significance existed only with regards to the fungicides used, and all treatments including the untreated control were superior to Terraclor.

In the second experiment, the post-cutting dip in Captan and Terraclor gave best protection against rotting. The benomyl systemic fungicide applied to the stock plant was the least effective treatment with a lower number of cuttings surviving than for the untreated control.

The most effective treatment in the third experiment appeared to be the combination of allowing the cuttings to cure 4 days in an open greenhouse, with at least 50% shading, and exposed to temperatures between 25.5°C and 31°C, with relative humidity around 70%, followed with a dusting with Captan as a 50% wettable powder.

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