

CLEMATIS PROPAGATION*

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Some growers have suggested that clematis cuttings should be rooted upside down. This study was conducted to see what advantages could be obtained from different methods of rooting cuttings. Treatments included placing the cuttings upside down, removing foliage, and centrifuging. Centrifuging was done in an effort to change the natural polarity and to concentrate natural substances such as auxins and carbohydrates in an area of the plant where they could be used for root initiation and growth.

Semi-hardwood cuttings of the variety Madame Baron-Veillard were prepared May 5, 1962. These cuttings were single node with 2 to 3 inches of stem remaining below the leaves. The lower inch of stem was dipped in a rooting powder composed of two parts Hormodin 2 (0.3% indolebutyric acid) and one part Rootone (0.065% naphthylacetamide, 0.033% 2 methyl 1 naphthylacetic acid, 0.013% 2 methyl 1 naphthylacetamide, 0.057% indolebutyric acid). Intermittent mist kept the leaves continuously moist while heating cables kept the rooting medium of coarse sand at 77°F. The air temperature during rooting averaged 66°F. with a maximum of 75°F. and a minimum of 60°F.

The table below shows rooting results after 24 days.

Treatment of cutting and position in sand	Percent rooting	Number of roots per rooted cutting	Average length per root (mm.)
Upright	90	6.4	30
Upright centrifuged	83	7.8	34
One leaf removed	70	3.6	16
Inverted	0	-	-
Inverted centrifuged	0	-	-

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The table shows that best rooting is obtained when cuttings are inserted in an upright position with leaf area not reduced. Removing foliage is not beneficial for rooting but less bench space is used. Auxiliary buds broke sooner when one leaf was removed but often no roots were present to support growth.

Centrifuging cuttings for five minutes at 5,000 rpm did not give significantly better root length or number. The reduced rooting percentage may have been due to the fact that petioles were broken and some cuttings died as a result.

Inverted cuttings did not prove beneficial under these conditions. However, after 31 days in the rooting medium small roots were evident on some inverted cuttings.