

The toothpick trick

by Rob Nicholson

It has always struck me that some of the most beautiful plants are also the most scarce. As an example, I would have to point to the Yulan Magnolia (*M. heptapeta*, or *M. denudata*), a personal favorite of mine which despite its hardness remains rare in the eastern United States. Scarcity is tied almost invariably to propagation difficulties (although a parsimonious source can occasionally be a problem), and I had always felt that many magnolias, particularly the Yulan, could use a more productive method of propagation. With this in mind I undertook a small study with the objective of boosting the rooting percentage of magnolia cuttings. I have some surprising results to report.

The study was a comparison of five treatments. The first was the control; in the second, cuttings were treated with a commercial IBA (indole butyric acid) powder (0.8 percent); and in the third the cuttings were given a five second

dip in an alcohol-base IBA solution of 5000 ppm (parts per million). The fourth and fifth treatments were quite different and, I believe, a new technique.

Flat toothpicks were put into small bottles containing solutions of water-soluble indole butyric acid (K-IBA). These solutions were made to a strength of 1000 ppm and 5000 ppm. The toothpicks were soaked for a few days, and their color changed as they absorbed the amber hormone solution. The toothpicks were then inserted into the basal end of the cuttings, into the soft pith. They were pushed longitudinally up into the cutting about one third of an inch. The protruding end of the toothpick was then cut off.

All cuttings of the four taxa to be used in the test were taken in early summer, treated, inserted in a medium consisting of sharp sand and perlite (1:1) and placed under an intermittent mist system over the summer months. They were overwintered in the flats in which they were initially stuck and were held in a cool greenhouse (40° F).

Performance was rated in early April. The percentage of rooted cuttings was noted and a qualitative assessment was made of these rooted

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PLANT	TREATMENT, PERCENT ROOTED AND QUALITY POINTS				
	Control	IBA Powder 0.8%	5000 ppm IBA Dip	1000 ppm K-IBA Toothpick	5000 ppm K-IBA Toothpick
<i>M. loebneri</i>	0%	20%	40%	40%	90%
'Merrill'	0 pts.	3 pts.	9 pts.	8 pts.	25 pts.
<i>M. soulangiana</i>	20%	40%	60%	70%	70%
'Brozzonii'	2 pts.	7 pts.	11 pts.	19 pts.	21 pts.
<i>M. heptapeta</i>	60%	90%	---	80%	80%
	8 pts.	17 pts.		18 pts.	22 pts.
<i>M. 'Elizabeth'</i>	20%	40%	---	---	50%
(<i>acuminata</i> × <i>heptapeta</i>)	2 pts.	11 pts.			13 pts.