

Propagation of *Osmanthus armatus* From Hardwood Cuttings

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INTRODUCTION

Osmanthus armatus Diels is a large holly-like evergreen shrub from 2-4 m and approximately the same spread- The oblong ovate leaves (7-14 cm) are dark green and glossy and are heavily toothed. They are quite stiff and are generally inflexible- New growth has reddish tints. Like other members of the genus, the flowering of *O. armatus* is pronounced, with a strong fragrance. Griffiths (1994) lists the presence of purple fruit, but observation of isolated plants over a number of years has failed to find any fruit- It is possible that like some other members of the Oleacea the plant could be dioecious or self-sterile. Hardiness is listed as a Zone 7, but plants in Philadelphia, Pennsylvania, have stood the test of time and are fully a Zone 6. It is not encountered frequently in the landscape, and perhaps this is because it is essentially a very large evergreen bush, although on large estates or plantings it could have a significant presence. Ideally it should be placed so that the scent of the highly fragrant flowers can be appreciated.

MATERIALS AND METHODS

Cuttings of *O. armatus* were obtained on a day when temperatures were above freezing during the month of January and held in a cooler at 4 °C until March. The cuttings were from 10-16 cm long with four to five leaves attached. Wood was selected for being stout and quite firm. Large stem diameter was preferred with 2-year wood being preferable. Cuttings were wounded and 5000 ppm IBA in propyl- ene glycol (Barnes, 1989), They were stuck in a 1 sand :1 ground pine bark (v/v) mix in an open tray with bottom heat at 10 °C. Air temperatures were allowed to fluctuate depending on sunny conditions. Cuttings were syringed with water as needed generally from one to two times a day.

RESULTS AND DISCUSSION

By mid May cuttings were removed and potted with a 60% take. Cuttings were removed from the trays, potted, and placed under mist for 5 days in July. They proceeded to initiate new growth almost immediately upon being removed from the mist with temperatures in and around 28-32 °C.

It seems likely that with an increase in bottom heat an even greater rooting percentage could have been obtained, but hormone levels and the type of cutting seemed to be in balance when compared to efforts with other *Osmanthus* species.

Barnes (1989) showed that a related species, *O. americanus*, rooted very well with IBA in propylene glycol under similar circumstances. Jacobs (1990) worked with *O. fragrans* in August and got good rooting with K-IBA on cuttings that were hardened spring growth. Stephens (2000) mentions that *O. fragrans* f. *aurantiacus* rooted slowly from cuttings taken in mid to late May in South Carolina with 8000 ppm KIBA. In all cases some common requirements should be met. The wood has to be well hardened. Hormone levels should be reasonably high, and high ambient

temperatures or bottom heat is helpful. Mist may or may not be a requirement depending upon the time of year. Cuttings of *O. armatus* did not have a lot of leaf drop during the winter months, although cuttings of *O. heterophyllus* has a significant leaf drop, often denuding the cutting completely and rendering it unsuitable from that point on under similar circumstances. *Osmanthus armatus* cuttings are not fussy once rooted and if transplanted early will resume growth before fall.

SIGNIFICANCE TO THE NURSERY INDUSTRY

Osmanthus armatus is an attractive shrub and has good cold hardiness possibilities. Flowering, while insignificant, is quite fragrant, and the shrub does have merits for fragrance in the garden. In many instances it could be planted in the same situations as many hollies.

LITERATURE CITED

- Barnes, H.W. 1989. Propylene glycol quick dips: Practical applications. Comb. Proc. Intl. Plant Prop. Soc. 39:127.
- Griffiths, M. 1994. Index of garden plants- Timber Press. Portland, OR.
- Jacobs, R.M. 1990. New propagation techniques- Comb- Proc. Intl. Plant Prop. Soc. 10:391.
- Stephens, T. 2000. Sonic exciting new woodies and perennials for zones 7, 8 and 9- Comb. Proc. Intl. Plant Prop. Soc. 50:496.