

11. Morgan, J. V. and H. W. Lawlor. 1976. Influence of external factors on the rooting of leaf-bud cutting of ficus. *Acta Hort.* 64:39–46.
12. Poole, R. T. 1983. Propagation of aglaonema. Agricultural Research Center—Apopa Research Report RH-1983-24.
13. Poole, R. T. and C. A. Conover. 1984. Propagation of ornamental ficus by cuttings. *HortScience* 19(1):120–121.
14. Poole, R. T., C. A. Conover, A. R. Chase, L. S. Osborne, R. J. Henny and R. W. Henley. 1983. Aphelandra production guide. *Florida Coop. Ext. Serv. Ornament. Hort. Commer. Fact Sheet OHC-9.*
15. Poole, R. T., C. A. Conover and W. E. Waters. 1974. Bud-break in canes of *Dracaena fragrans* Ker. cv. Massangeana. *HortScience* 9(6):540, 541.
16. Poole, R. T. and W. E. Waters. 1971. Soil temperature and development of cuttings and seedlings of tropical foliage plants. *HortScience* 6(5):463–464.
17. Rauch, F. D. 1981. The influence of shading and mist on rooting of selected foliage plants. *The Plant Propagator* 27(2):8, 9.
18. Wang, Y. 1987. Effect of warm medium, light intensity, BA, and parent leaf on propagation of golden pothos. *HortScience* 22(4):597–599.

## **PROPAGATION OF DWARF NANDINA CULTIVARS**

BILL BARR

*Hines Wholesale Nursery*

*P. O. Box 42284*

*Houston, Texas 77242*

Dwarf nandinas (*Nandina domestica*) are relatively easy to root. However, there are three problems: It is hard to obtain enough cutting wood; the work is very labor intensive; and, third, the proper application and frequency of the mist is critical.

At the Hines (Houston) facility, we grow four cultivars of dwarf nandinas: 'Compacta Nana' ('Purpurea Nana'), Harbour Dwarf, 'Gulf Stream' (Plant Patent 5656), and 'Moon Bay' (Plant Patent 5659). We use the same propagation techniques for all four.

All of the propagation wood is collected from container-grown material which is a very time consuming job. We use the tips only with no brown wood. Usually the stem part of the cutting will be ½ to 1½ in. long. The wood is stored in a walk-in cooler at about 50°F for up to 48 hours, but preferably no longer than 24 hours.

The cuttings are prepared indoors. All we do is strip off a few bottom leaves, just enough so that the foliage is not too thick during the rooting process. On 'Harbour Dwarf' we also reduce the overall diameter of the foliage. We occasionally recut the basal end if the cutting is too long. The cuttings are bundled into groups held together by a rubber band and then quick-dipped into a solution of Benlate and Agristrip at the recommended rates.

The cuttings, still in bundles, are next quick-dipped into a solution of 1250 ppm IBA and 500 ppm NAA. The cuttings are all direct stuck into a new 2¼-in. pots, one per pot. We hold the cuttings by the leaf petioles and stick them to the tip of the stem, many times completely burying them. This process is another operation that is more labor-intensive than usual. The medium we are using is pine bark, peat, and sand, 2:1:1(v/v/v); 2½ lbs. of 18-6-12 (8 to 9 months) Osmocote is added to the mix along with lime and Micromax.

The pots are then placed in a 47% shade mist area where we closely monitor the mist. We prefer to root them in an area that has the parasol nozzle (¼ E 5.8) by Spraying Systems. This nozzle gives a fine spray with low water volume. However, we will use spinner type nozzles occasionally. It is very important not to overmist this plant because the foliage retains a lot of moisture. Overmisting generally results in an increased level of fungal problems. We do mist normally for the first 2 to 3 days after sticking, then cut the mist back. In Houston that usually means we start the cuttings on 15-minute intervals and then increase to 30 minutes. If it does not rain on the crop, we normally have to water the soil about every 10 to 14 days because the medium does not stay moist enough from the mist water. We also carefully check when the mist turns off for the day, which is usually two hours before sunset.

The cuttings usually root in 3 to 4 weeks and are off of the mist in 5 to 6 weeks. In another 5 to 6 weeks, the plants are ready to be shifted into gallon containers. We have noticed that root initiation first starts at the basal end of the cutting, but in about 3 weeks roots appear up the entire stem. The change in leaf color is very noticeable during the rooting process, changing from green to a burgundy color.

We have been successful rooting dwarf nandinas almost any time of the year. We have not tried to root them during the spring flush, however. Normally, 80 to 90% of the cuttings root.

During the winter we frequently take cuttings from liners grown in a quonset house without heat. For these cuttings the only change is that they are rooted on bottom heat at 72° to 75°F. For any cuttings that come from outdoor-grown material then, we also change the hormone concentration to 1870 ppm IBA and 1000 ppm NAA. They also are put on bottom heat.

In conclusion, dwarf nandinas are easy for us to root with the above procedures.

#### LITERATURE CITED

1. Berry, James, 1984. Rooting hormone formulations: A chance for advancement. *Proc. Inter. Plant Prop. Soc.* 34:486-490.
2. Gwaltney, Tim, 1983. Propagation of dwarf nandinas. *Proc. Inter. Plant Prop. Soc.* 33:624-628.