

Dogwood Propagation from Cuttings

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Trail Ridge Nursery is located in northeast Florida, halfway between Gainesville and Jacksonville and about 50 miles south of the Florida-Georgia state line. We are on the southern edge of USDA Hardiness Zone 8b. We are a wholesale container tree nursery specializing in cultivar trees with an emphasis on flowering dogwood (*Cornus florida*) and southern and oriental magnolias (*Magnolia* spp.).

We initially grew our flowering dogwood from seed. However, we realized that seed propagation did not produce a uniform crop. We were ending up with a large number of unacceptable trees and the good trees would not flower for several years, if at all. We then decided to put our efforts into growing named cultivars only.

In evaluating several named dogwood cultivars, we found that most did not grow well for us. We felt that it was probably because they were selections from areas farther north and not well adapted to our area. We did, however, have one white-flowering form that was a much superior tree, both in vigor and flowering characteristics. It was a selection made by Dr. H. H. Hume in the mid-1940s. It is believed the parent tree was from Gainesville, Florida. He named it 'Weaver's White' for a University of Florida professor. The tree was put into commercial production by two nurseries (Glen St. Mary and Holmes Nurseries) and became well known and accepted. At that time the method of propagation was by field budding. However, as budders and grafters became harder to find, production fell off and finally ceased.

We have found the tree relatively easy to root and the following is the procedure we are currently using.

We take 15- to 20-cm (6- to 8-in.) terminal cuttings from the first flush of growth which is normally in late June or early July. Our criteria for when the cuttings are ready is when the tip is rigid enough to support itself. They will root at an earlier stage but if the tip bends over while in the mist a crooked tree is produced which is unacceptable for our standards. The cuttings are taken to the misthouse where the lower leaves are removed, leaving 4 to 6 leaves — depending on leaf size. The cuttings are then given a brief fungicidal bath of Tilt followed by a basal quick dip of 5000 ppm KIBA. The cuttings are then stuck in benches of pure horticultural perlite and misted. Our average mist cycle is 6 sec every 16 min, depending on weather conditions.

In 3 weeks we start looking for rooting. When we begin to get good rooting on some cuttings, we pull up all the cuttings and sort them into four groups: well rooted, lightly rooted, callused, and those showing no activity. The first three groups are potted into 6-cm (2.5-in.) rose pots and kept separate in the misthouse. The remaining cuttings are restuck in perlite media. This process continues until we determine there will be no more rooting, at which time the remaining cuttings are discarded.

We continually check the potted trees and individually remove them from the mist when they have an established root system. These are moved to a hardening-off house and placed on benches where they are watered twice a day and periodically fertilized with a liquid fertilizer. We have lights over the benches and use them to

extend the day length by 4 h. We have found that this helps to get the cuttings to flush out and begin growth before the winter. If no growth flush occurs before winter, the survival rate drops dramatically. When the trees are fully rooted out and have flushed out they are shifted up to 3.8-liter (1-gal) containers and moved out to ground beds under full sun with overhead rainbird-type irrigation. In areas farther north with shorter growing seasons, the finished liners would likely have to be held in a greenhouse over winter.

We have used these procedures for over 10 years and have found them to be successful for other cultivars as well as with 'Weaver's White'. Our initial rooting yield is around 80% and we normally lose another 10 to 20% of the trees between rooting and the potting up procedure. The 1-gal trees are shifted up to 11-liter (3-gal) containers the summer after propagation and we end up with trees that are 0.9 to 1.2 m (3 to 4 ft) by fall.