

GROWING DOGWOODS IN CONTAINERS

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Turtle Creek Nursery

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Turtle Creek is a 16-year-old nursery growing a wide selection of shrubs and trees on about 25 acres. We employ mainly female labor to handle our container production of 3- to 20-gal. plants. We also grow about eight acres of field-grown hollies, crape myrtle, and selected trees.

Several years ago we started growing container trees, predominantly dogwoods, since that was the most popular tree we were selling. We were successful enough so that we decided to specialize in growing container dogwoods and other selected trees. Most of the comments made for dogwoods also apply to the other trees we grow.

The largest markets for our plant material are garden centers and landscapers in the Baltimore, Md., Washington, D. C., Richmond, VA, and Norfolk, VA areas. We also have a cash-and-carry trade of local landscapers and a retail outlet on our premises.

We grow white and pink seedling dogwoods; 'Cherokee Chief', red; 'Cherokee Princess', white; 'Cloud 9', white; 'Cherokee Sunset', red with variegated foliage; 'First Lady', white with variegated foliage; and 'Milky Way', *C. kousa*, white. Dogwoods are marketed in 5-gal., 7-1/2-gal., and some 10-gal. containers. Some of the smaller-growing cultivars are not grown in 10-gal. size. We purchase one-year field-grown liners for most potting and some 2-year buds for our 10-gal. potting.

There are seven main factors in growing high-quality container trees—especially dogwoods:

- 1). Buy good liners, free of disease, and with a good root system,
- 2). Pot early because you cannot reconstruct new roots and grow tops at the same time,
- 3). Keep the soil fertility rate up, even in August and September,
- 4). Keep plenty of moisture available, but be sure to maintain good drainage,
- 5). Keep plants clean of spot anthracnose with good air circulation and preventative spraying,
- 6). Choose the correct pot size for projected growth,
- 7). Finish off in one growing season.

All of these points must be followed to assure maximum growth and development in a container dogwood.

In purchasing our liners, we think it is important to know our growers. Years of experience dealing with a good nursery usually

gives us less problems with plants. We buy one and two-year North Carolina seedlings and Tennessee budded dogwood liners. We buy for uniformity. We tried row-run, but got no uniformity in our finished product, so now we buy graded plants. We like our liners to have good root systems, and we think that is promoted by root pruning the liners. It is especially important to buy clean liners with no hidden disease from the prior season.

Protecting liners when they come in can be the difference in life and death. We stress to our suppliers immediate shipment and proper care after digging. We immediately heel our liners in sawdust when they come in. We pot by hand as early as we can get our liners. We like to pot in late November and December since we have student labor available then. We use a well-drained soil mixture that we blend ourselves. The components of our soil mix are in Table 1. We dip the roots of all trees in TerraSorb wetting agent just before potting to keep the roots from drying out. We put our newly-potted dogwoods right outside pot-to-pot, since we have had little problem with cold damage on newly-potted plants. We fence the entire bed with 36-in. high poly around the outside border of the bed. By late May we spread the dogwoods to 18 to 25 in. centers, depending on the size pot. We do winter-protect our second season dogwoods (9 to 10 months old after potting) in white plastic-covered cold houses. We stack every other row across the bed to conserve space. It is more important to winter-protect cherries over dogwoods, since their root systems are more cold sensitive. We have built four large coldframes by putting in greenhouses using 6-ft. ground stakes. These are 15-ft. high and work nicely for larger 14 and 20-gal. plants. These houses require 48-ft. white poly to cover them, which is somewhat difficult to get.

Table 1. Soil mix for container dogwood plants

60% bark	0-20-0 superphosphate
20% coarse sand	pellet lime
10% peat moss	Micromax
10% perlite	

The fertilizer level is especially important to sustain the accelerated growth we experience. We usually start to fertilize our trees in April. Once we get them growing, we try to keep them from going dormant or shutting down growth. Dogwoods can be kept in continual growth all summer if you work at it. Our fertilizer mixture and rates are listed in Table 2. We dibble this mixture in one spot on 5-gal. and two opposite spots on 7½- and 10-gal. containers. The dibbling is done mainly to keep from losing the Osmocote if the plant is blown over. We have found no significant difference in dibbling and top dressing. We supplement our granular fertilizer

with fertigation of 46-0-0 urea dissolved in cold water and injected through our irrigation system. We fertigate early in the season if our granular fertilizer is a little late going on and, particularly, in August and September, when our granular feed is waning. During the summer we fertigate biweekly in early evening to avoid sun scald. In August and September we hand-apply Peters 21-7-7 Azalea Neutral through our Geva Fertilizer injector directly into the pot for an extra flush of growth. Our growth rate during August and September will match the growth from April through July. This is why we must keep the fertility up during the latter part of the growing season. Table 3 gives the rate of fertilizer applications.

We have tried our dogwoods on drip and under overhead irrigation. Overhead is best for us. We water for two hours every other day, putting out about one inch of water. During extreme heat situations, we will run 30 min. cool-downs when needed. We try to be finished watering dogwoods by mid-afternoon, especially as the weather cools so that the foliage is dry by dark. We think our water schedule helps cut down on spot anthracnose.

Table 2. Fertilizer mix for container dogwood plants

By weight		By volume
100 lbs	cottonseed meal	2 parts
150 lbs	Osmocote (18-6-12) regular	2 parts
75 lbs	10-10-10	1 part

Table 3. Rate of fertilizer application

5-gal container	$\frac{1}{3}$ cup
7½-gal container, or 10-gal container	$\frac{2}{3}$ cup

We control fungus on our dogwoods by spraying with Benlate and captan. We use Daconil 2787 for an alternate spray. Orthene or Maverick is used in the same spray for insects, which are not a major problem with dogwoods. We start spraying by May first and spray every four to six weeks until late October. For weed control in all our containers we alternate Rout and Ronstar. Our dogwoods have shown no ill effects from either one.

Once we have grown our dogwoods to a finished size, we have to market, sell, and ship them. See Table 4 for the beginning-to-finished size ratio of our dogwoods. At least 75% of our dogwoods are sold in the fall, just 9 to 10 months from pottings. We ship on

tractor trailer, closed van, and local pickup trucks. Dogwoods and other trees bruise easily, so we use carpet squares wrapped around the trunk when stacking them.

Table 4. Beginning-to-finished size ratio of container-grown dogwoods

Size potted	Pot size	Finished plant size
12 to 18 in	5 gal	3 to 4 feet
24 to 30 in	7½ gal	4 to 5 feet
30 to 36 in	7½ gal	5 to 6 feet
36 to 42 in	10 gal	5 to 6 feet
3 to 4 ft	10 gal	6 to 7 feet

We choose to grow dogwoods in containers because they give almost 100% liveability for our customers. They look good, having nice fall foliage and a good plant-to-pot ratio. Container dogwoods sell well for us and for our customers. We think it is important to grow a good plant, sell a good plant, and certainly to deliver a plant to your customer in good shape.