

## FIELD BUDDING OF DOGWOOD

HUBERT NICHOLSON  
*Commercial Nursery Co. Inc.*  
*Decherd, Tennessee 37324*

Normally, field budding of dogwoods begins with us between August 1st and 15th, depending upon the seedlings' development. If transplanted seedlings are used, budding can be started earlier. We have found that thinning of seedlings to a stand of 10 to 12 to the foot is desirable. If this thinning is done early in the growing season, it speeds up the date budding can begin and gives a larger caliper seedling for budding. We have found early thinning of the seedling row without field irrigation is risky. As 90% or more of our dogwood are budded on field-grown seedlings, we will limit ourselves to budding on this type of seedling for now.

Under the best of conditions field budding of dogwood is done on very tender seedlings, and it is very important to have budwood in a similar condition. For these small tender seedlings we want small tender budwood but firm enough to push into the seedling. A lot of skill and dexterity is required to handle these tender buds and tender seedlings. The first operation performed on the seedlings is what we call "scratching". This scratching removes the lower 4 to 6 leaves and any grit or dirt on the seedling, any small side limbs, any seedlings too small to bud, and any gravel, loose dirt or other debris in the seedling row, just to clean the row for the budder. This operation we normally perform right in front of the budder; but sometimes it may be done a week or more in advance, if plenty of moisture is present. In hot dry weather we never let the scratcher get more than a half day's budding ahead of the budders.

The budwood is normally gathered a day in advance, pruned, wrapped and allowed to stand in one inch of water overnight. Occasionally we may refrigerate budwood at 40 to 45°F a few days.

The budder cuts a shield bud about 1/2 inch to 3/4 inch long by making a slanting cut under the bud and a cross cut above the bud only through the bark, so that when the bud is snapped off the budstick, the wood from the underside of the bud will remain on the budstick and not be inserted into the seedling. If a little bit of very soft wood does stick to the bud, we leave it there as the bud can easily be bruised trying to pry out this small piece of wood. If too much wood is coming off under the buds, we look to the way the budder is cutting his budsticks or to the hardness of the budstick. These budsticks have been prepared for the budder, wrapped in burlap and plastic, and carried around his waist. A vertical cut

about 1 inch long is made on the seedling, preferably on the southwest side. We bud on the prevailing wind side as we feel some pressure from the wind will help make the bud grow up rather than out from the seedling. A cross cut is made at the top of the vertical cut with a rotating motion of the knife blade, which opens up the vertical slit. The bud is then removed from the budstick and inserted under the bark of the "T" slit and pushed down until the slit is opened a little deeper by the tip of the bud. This assures a tight fit on the nose of the bud. The bud is placed as low on the seedling as practical, usually about 2 inches above the ground.

The wrapper is immediately behind the budder no more than a few minutes. If there is too much time between budding and wrapping, the bud will curl and the lip will open. The bud is wrapped tightly into the vertical slit using rubber bands (4" × 1/4" × 10 gauge). The wrapper starts his wrap below the eye of the bud, makes at least 2 turns below the eye, leaves the pruned leaf stem of the bud exposed, makes about 3 or 4 turns above the eye, and ties the rubber strip on the last round of wrap. The rubber wrap is being stretched as it is placed on the seedling, which makes for a tight connection between the bud and seedling. Rubber wraps have replaced raffia which is hard to prepare and had to be cut off the seedlings about 2 weeks after budding to prevent girdling. The rubber wraps will expand as the seedling grows, and normal deterioration will remove them in about 4 weeks.

We normally bud dogwood through the month of September. The seedlings are more succulent and bud better in September than in August. We do not cultivate the seedlings any more after they are budded. It is very profitable to use irrigation when no rain has fallen.

Usually in December, after the plants are thoroughly dormant, these budded seedlings are root pruned to induce the development of a fibrous root system. A flat blade is run under the row about 8 inches deep, disturbing the plants as little as possible. For weed control over winter and into the following spring we have satisfactorily used Kerb and Princep.

The following spring (around April 1st) before bud growth starts and after hard freezes, the seedling top is cut off just above the bud, and all hard suckers are removed. As soon as the ground will work the row is cultivated and a complete fertilizer (10-10-10) is applied as a side dressing on each side of the row at about 800 pounds per acre. As the bud begins to grow, so will suckers below the bud and these must be kept removed. A side dressing of ammonium nitrate is usually applied in July at the rate of 200 pounds per acre.

By the end of the first growing season we will have plants from 12 to 36 inches in height, depending on how good a growing season we have had. If we have a good stand of buds and have done a good job of growing, we may have 3 to 6 salable plants to a linear foot of row.

When the trees have lost most of the leaves and are well ripened and dormant, usually mid-December, we run the digger. If we are going to harvest all the plants, we will use a slight lifter on the digger blade. We prefer to get the digger under the plants and let them sit where they are. Then we can bring them in for grading as needed. They store better in the ground than in a storage house.

We usually grow a small percentage of our dogwood on one year transplanted seedlings, lined out in the spring and budded that summer. Usually the transplanted seedlings can be budded earlier, they are insurance against a seedling failure, they grow a heavier tree in one year, and they can accept bigger budwood. On the other hand, they require staking which is expensive, they are more expensive to line out, they give a lower percent of "takes", and they do not make as smooth a tree at the bud union as a dogwood budded on a field-grown seedling.

The basic techniques described above have been field proven over many years by the production of hundreds of thousands of dogwoods in middle Tennessee.

## **PRODUCING DOGWOOD BY CUTTINGS**

CARL BAUER

*Phytotektor, Inc.*

*Huntland, Tennessee 37345*

We have been rooting dogwoods in the nursery for three years. Initially we were prompted by lack of competent budders. Also, we felt that rooting would possibly reduce some of the disease and virus problems, since there is no man-made wound. Rooting also appeared to be the logical answer since we are in the business of producing liners, and 95% of our other liners are from cuttings. I began by reading everything I could find on the subject. The best paper that I found was a graduate paper by Mr. Morris of Eva Nurseries, Eva, Alabama, which was written while he was a student at Auburn. I would like to state in the beginning that while we have been very successful in the rooting of dogwoods, we have developed no new technique.

Most of our work has been with softwood cuttings of current year's growth. Our work has been confined to cultivars that we normally produce: *Cornus florida rubra*, and *C. florida* cul-