

done very well as far as loss is concerned. I haven't used metal containers so I'm not sure how they would respond, but I do prefer clay pots.

MODERATOR FLEMER: Hans, I want to thank you for a very useful paper and I believe it should save someone a lot of money.

Our next subject concerns, "Top Grafting Japanese Maples and Dogwoods" and will be presented by Leonard Savella.

TOP GRAFTING OF JAPANESE MAPLES AND DOGWOODS

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My talk today will be on top grafting *Acer palmatum* var. *dissectum* and *Cornus florida* 'Welchii', although any of the Japanese maples or the tree form dogwoods can be grafted in the same manner if you so desire

Top grafting of *Acer palmatum* var. *dissectum* and *Cornus florida* 'Welchii' to many propagators may not be something new; however, the methods we use to propagate these two particular plants may be an improvement over the old methods.

The preparation of understocks are the same for both maples and dogwoods. We start by selecting our understocks in the spring. This is not always an easy task because the supply of straight, strong stems may be short. The propagator then has to select the best he can from what is available.

For maples the understocks should be tall enough so that when they are decapitated and ready to graft, the stem will be at least 18" tall and have a caliper of 3/16 inches or more. In my experiences stems grafted at 18 inches and up to 3 feet have made the best plants.

Dogwood understocks are easy to obtain and the propagator should have no trouble selecting straight stemmed plants. If you choose to grow your own dogwood understock, a good practice to follow is to seed them in a bed and let them grow undisturbed for 3 or 4 years. The closeness of the seedlings will make them grow tall and straight and will eliminate the lower branches, giving the plant a clean stem. Dogwoods grafted 4 to 5 feet high, in my opinion, make the best plants.

Once we have selected our understocks they are potted in containers and placed outdoors in beds where they are mulched, shaded and watered and grown that year until they are ready to be grafted the

following winter. The purpose of this is to establish good root systems on the understocks.

Before freezing weather comes, the plants are brought into holding houses where they are cared for until they are ready to graft. During the first two weeks of February we start to do our top grafting. A plastic tent 30 inches high is constructed over the greenhouse bench. The length of the tent is determined by the number of plants to be grafted. The tent is constructed high enough so that the grafted plants placed within do not touch the top of the plastic. The tent must also be constructed in a way that will make it airtight once the grafts are within and it is closed tight.

We start by grafting the maples first. The stems are brought to the workbench where they are cut at 18 inches to 2 feet. The scions are spread on the bench, where the men doing the grafting can select the scion to match the stem. We try to match the stem and scion as close as we can. This will hasten the healing and make a better union. The scion is cut to a sharp wedge about 1½ inches long. Care is taken not to separate the bark from the wood at the base of the scion.

The stem, or understock, is cut the same length; as close to the center of the stem as possible, without splitting the stem, causing jagged edges. The scion is placed into the cut made on the stem and tied with rubber grafting strips. Three or four ties are sufficient to hold them together. Make sure that the rubber band does not cover the base of the scion. If the rubber band covers the base of the scion, every scion will rot. No wax is used on the union.

The grafted plants are brought into the greenhouse and placed upright, side by side, on the bench within the plastic tent. The propagator should try to graft as many plants as he can within 2 or 3 days. If the grafting period takes more than 3 days, a separator should be installed to separate the plants that are yet to be grafted from those already grafted. The reason for this is that the grafted plants, once placed inside the tent, will start to grow leaves in 3 weeks. Once the scions start to grow leaves they must not be allowed to remain in the closed tent; they must be aired or they will "cook". By placing the separators in the tent, you can air the growing plants and leave the others undisturbed. Once the grafts are out of the tent, they should be syringed daily, as often as necessary.

The procedure for top grafting 'Welchii' dogwood is somewhat different. The understocks are decapitated at 4 to 5 feet. The top of the stem is cut on the side 1½ inches down and made ready to receive the scion. Unlike the maples, the dogwood scion is not cut to a wedge. It is cut 1½ inches long and the angle cut at the base is slightly elongated. Caution should be taken not to separate the bark at the base when making the angle cut. The scion is then placed into the cut of the stem and tied with rubber grafting strips. If the propagator wishes to, he may put two scions, one on each side, of a single stem.

A ball of wet sphagnum moss is tied below the union, and a plastic bag, large enough to cover the scion and union, is inflated and tied just below the moss. The ball of wet moss will give enough humidity within the plastic bag to sustain the scion and insure the healing of the union and the growing out of leaves.

The grafted plants can be stored at the ends of the greenhouse walks or stacked anywhere in the greenhouse where there is room. Once the leaves have started to grow, open the bottom of the plastic bag and allow air to enter. The plastic bag is left on the graft with its bottom open for 2 or 3 days, then it is removed permanently.

A step-wise summary is as follows:

1. Select straight strong stems and pot the understocks in the spring.
2. Match scion and stem as closely as possible when you graft; no waxing of the union is necessary.
3. Make sure the poly tent is airtight and the scions are not touching the plastic.
4. Air the tent as soon as the leaves start to grow.
5. Once the plants are out of the poly tent and plastic bags, care for them in the usual manner.

MODERATOR FLEMER: Thank you, Leonard, for that explanation of a successful method of grafting maples and dogwoods and, I must say, it is an unusual one too.

JOHN ROLLER: Have you tried the poly bags outside of the tent or under a lot of shade?

LEN SAVELLA: If I put them in the tent, then I don't use the poly bag. The poly bag is used when we run out of tent space. But the best way is to build a tent big enough to take these plants because it is trouble free. You don't have to syringe them or worry about them drying out.

HARRY HOPPERTON: Why don't you just bud them and save 90% of the cost of all this work?

LEN SAVELLA: We have over 300 acres and are running out of space. We feel that by doing it this way we can do it during the winter and get a lot more done than what we could do in the field.

MODERATOR FLEMER: Our next speaker is Hoy Grigsby from down in Louisiana and he is going to talk to us about the handling of southern pine cuttings prior to sticking them.