

GRAFTING OF JAPANESE MAPLE CULTIVARS

DON SHADOW

Shadow Nursery, Inc.

Route 1

Winchester, Tennessee 37398

Japanese maples have been used in the Orient for more than 300 years. They can no longer be brought here directly from Japan but must be sent to Korea or Holland for growing on, then sent here. They are one of the most diverse groups of all ornamental plants. Within the group can be found close to 300 cultivars. Forms range from dwarf to upright, cutleaf to palmate, and variegated to many other unusual characteristics. Also, outstanding spring and fall coloration is an added feature among this group of plants. Some have red or green bark or exfoliating bark. The most serious cultural problem is leaf scorch, which is a physiological reaction to water stress. They are extremely sensitive under high light conditions. There is an excellent reference by J.D. Vertrees (1).

Grafting of Japanese maples begins in early January. The well-established understock is allowed to go completely dormant before being brought into the greenhouse in December. The plants are then sorted and placed in benches according to whether a low or tall graft will be made. The greenhouse is best positioned north and south so that the sun rotates completely across the greenhouse for optimum radiation.

Both side veneer grafts and top grafts are made according to how well the scion matches the understock. Most scions are collected the day of grafting unless we have freezing temperatures. Since most maples have a thin bark, it is important that the scions are in good condition for optimum callus formation. Of course, many scions are shipped to us from other nurseries and collectors, but we do not store any scions for prolonged periods. We use Tina knives, dipped frequently in alcohol or Benlate (benomyl). We also dip the cuttings in half-strength Orthene (acephate) to help control aphids.

The grafts are then wrapped with a rubber bud strip and coated with a black asphalt material (Treheal) applied at room temperature. We leave a narrow space on the back side, which allows for easy removal of the bud strip.

Grafts are immediately placed in the greenhouse in beds with clean sand as a stratum. The beds are provided with bottom heat as we want to keep roots growing actively. These beds are alternated with mist beds. In this way we can provide high humidity as the alternate beds mist every 30 minutes on a sunny day. We maintain 55°F or higher night temperature.

Daytime temperature may reach 85°F. We do not shade until it is extremely hot. We mark the cuttings with stakes in front of the first and behind the last plant. We write out the preferred Japanese name on the stakes. We change to metal tags when the plants are moved to the plastic house.

After the grafts have knitted and are growing, a careful check is made daily to determine if the rubber bud strip should be cut to prevent girdling. This is very important as the scions expand tremendously. A constant check is also made for suckers and aphids as they can weaken or destroy a good scion.

The grafts are allowed to remain in the greenhouse until the following fall. Some cultivars have grown in excess of 3 ft. during this period. All grafts are then moved to a plastic house for the winter.

Last year we grafted about 140 cultivars of *Acer palmatum*, plus cultivars of *Acer buergerianum*, *Acer campestre*, *Acer japonicum* and other species and their cultivars.

LITERATURE CITED

1. Vertrees, J.D. 1978. Japanese maples: Momiji and Kaede. Timber Press. Forest Grove, Oregon.

PROPAGATION OF SHADE AND FLOWERING TREES BY CUTTINGS AT PLEASANT COVE NURSERY

JAMES WHALEY

Pleasant Cove Nursery
Route 3, Highway 70S
Rock Island, Tennessee 38581

Pleasant Cove Nursery is located in Middle Tennessee where competition is keen. Since our only products are containers and balled-and-burlapped material, our customers are usually retail nurseries and landscape contractors. One of our foremost objectives is to provide our customers with a large selection. With over 140 cultivars of field stock and 100 cultivars of container-grown plants, it has become necessary to propagate many of our plants. In recent years we have expanded our propagation facilities to an annual production of over 500,000 plants. Of these, 125,000 are flowering and shade trees. We are constantly trying new selections of trees that can feasi-