

A Look at Propagation at a Diversified Nursery

David Threatt

Baucom's Nursery, John Russell Road, Charlotte, North Carolina 28212

Mr. Amon Baucom started Baucom's Nursery in 1956. Mr. Baucom is still active in the business. His two sons Chip and Gary are now also involved. Mr. Baucom had the foresight to convert a grading, landscape business to a container nursery and also started seven retail stores in Charlotte.

The goal of our company is to offer a full product line, with salable plants every day of the year.

In June 1988 ground was broken in Mt. Dora, Florida for a second nursery. Its purpose was to have a facility in a warmer climate to produce foliage and germinate seed.

Baucom's Nursery totals 300 acres in use including both the Florida and North Carolina operations. Two and one-half million square feet are under greenhouse plastic, of which 360,000 square feet are under mist.

I am attempting today to show very briefly the diversity of the propagation at our nursery. Each nursery present today has its own methods based on its own variables. I would like to share some ideas we have gained through trial and error.

WOODY ORNAMENTAL PROPAGATION

For many years we propagated azaleas in a 96-count tray. During the winter two cuttings were planted in a 4-in. pot. Fuel costs were continuing to rise and we could not invest in heat to grow these cuttings into liners by spring. We realized that we were not utilizing warm-weather conditions for liner growth. We also felt using individual 4-in. pots required unnecessary labor and changed to an insert tray. Our propagation mix for azaleas, junipers and other ornamentals is bark and peat (3 2, v/v) with 8 lb of lime.

During azalea propagation, cuttings are made early in the cool morning hours, and we coordinate our irrigation to insure stock plants are moist. We take cuttings approximately 4-in. long, strip the lower leaves (one inch) and pinch the center bud.

Woods Rooting Compound is used at a mixture of 1 part Woods to 15 parts water. Each liner cell contains two cuttings.

Every 7 to 10 days we spray Cleary 3336 WP in the evening after misting is stopped. We use Scotts Southern Weed Control following rooting. As a preventative measure, we alternate Banrot at 9 oz/100 gal and Subdue at 1.7 oz per 100 gal as a drench through a Smith injector at an interval of 45 days. Scotts 22-3-10 is topdressed at 6 to 7 lb/100 sq ft. Nutritional and pH levels are monitored regularly.

To reduce heat cost, temperature in the propagation house is maintained at 36°F throughout the winter.

Liners are pruned up to three times in the flat before planting. Azalea liners are maintained through the winter and potted to 1-gal containers the following spring beginning in mid-April.

We feel we benefit from direct sticking our cuttings into a liner tray by establishing roots during summer months. With minimal heat through winter, we can grow an established liner for spring. We also feel we are more productive by using trays

as opposed to individual 4-in. pots

Dwarf Nandina. Cuttings are made nearly year round except when growth is new in the spring. Woods Rooting Compound is used at 1:12 dilution. We direct stick our cuttings into 1-gal cans. Care must be taken to avoid over misting during rooting. Cuttings usually are sold in one-gal containers and some are shifted up to 3 gal.

Leyland Cypress. Cuttings are made in January. They are about 12 in long and are wounded on both sides. Woods Rooting Compound is used at 1.4 dilution. These cuttings are direct stuck in 1-gal cans in cold frames and root in about 3 months. One-gal cans allow heavy growth for transplanting into 3-gal cans.

Juniper. Juniper cuttings are made November through mid-February. One cutting per cell is stuck in our 24-cell tray. Woods Rooting Compound is used in 1:5 to 1:10 dilutions.

Most of our ornamentals are propagated in the fall in our 24-cell trays. Depending on the plant's growth habits, each liner contains one or two cuttings.

HERBACEOUS PLANT PROPAGATION

Poinsettia. In April we purchase 22,000 rooted cuttings from the Paul Ecke Company, which become stock plants. The cuttings are potted into 3-gal cans in a bark, peat and vermiculite (13:6:1, v/v/v) medium with 6 lb/cu yd Osmocote incorporated. They are liquid fed using Total Grow 20-10-20 at 200 to 300 ppm.

Until summer the stock plants are maintained between 62 and 65°F. When weather is consistently warmer, plants are moved from the greenhouse to an outdoor shade house, where the cuttings are made.

Starting in July, poinsettia cuttings are made from 6:00 a.m. until the stock plants show stress from the heat of the day, usually around 11:30 a.m. As the cuttings are made, they are transported every 15 minutes from the shade house to the greenhouse in styrofoam coolers. The lower leaves are removed and the cuttings are stuck 1/2- to 3/4-in deep directly in the 6-, 6 1/2- or 8-in. containers or hanging baskets in which they will be sold.

For probably 25 years poinsettias were stuck in individual rooting cubes. Maintaining and transplanting those cuttings was difficult and involved more time and labor. Cuttings must be misted even on a cloudy day to prevent leaf burn.

It is also important to prevent stretching of the cuttings during propagation. Five days after sticking we spray the cuttings with a mixture of 1500 ppm Cycocel and 2500 ppm B-Nine. Following rooting, all cuttings are hand pinched before the pots are spaced.

A regular pesticide program is essential. As we all know, the cuttings will only be as good as the stock. A monthly soil drench plan consists of Banrot, a combination of Clearys and Truban or Subdue. Our insecticide program consists of Orthene-Talstar, Orthene-Tame or Thiodon. A monthly application of Safer Soap is applied for white fly control. Fungus gnats are a real problem because of propagation conditions and are treated with a Vydate drench.

Perennials. Seeds are germinated in January for a March planting into a 1-gal container. Our soil is a mixture of bark and peat (7:3, v/v) with 8 lb of lime, 10 lb

of 22-3-10 and one lb of Step (Scotts Trace Element Package) incorporated per cubic yard.

Immediately after potting Scotts Southern Weed Control is applied. Proper watering and drying techniques are best to control height and bud set. Growth retardants such as B-Nine are used at 2500 ppm only as a last resort.

Geraniums. Our propagation starts with the purchase of unrooted cuttings which we direct stick into 6-in pots and put under mist. After rooting, the 6-in. geraniums are spaced on tables where most will be grown until they are sold. Some may be shifted to 10-in. pots for sales

When we have space and need cuttings, we take them from the 6- and 10-in. plants. The process also serves to pinch the plants. In addition geraniums are treated with Florel to stimulate lateral branching. This must be done two weeks before normal pinching.

Seed Germination for Bedding Plants. In a year we germinate close to 16 million seeds. We grow 22 flower and 9 vegetable types. Seeds are sown with Bouldin & Lawson or Blackmore machines in plug trays containing 128, 200 or 400 cells. Each cell may contain from one to ten seeds. After they are sown, trays are topdressed with a light coat of vermiculite and watered.

During the winter months seeds are germinated in a germination chamber we call the hot box. This chamber, which is equipped with a humidifier, is kept at 82°F. Seeds germinate in 4 to 14 days. After seeds germinate, trays are moved to the greenhouse and maintained until seedlings are transplanted.

The greenhouse is kept at 68°F and is well ventilated. We fertilize the seedlings with water-soluble Total Grow 20-10-20 at 75 ppm.

Our pesticide program consists of a weekly Vydate drench along with Banrot, Subdue, or Chipco.

Control of watering, fertilizer and temperature are the best growth regulators and least expensive, but to prevent stretching B-Nine is used one time on seedlings.

All sowing schedules are arranged on a computer. Each schedule gives sowing dates, transplanting dates to bedding flats and tentative sale dates. The computer also maintains the inventory for each item.