Meshing Perennial Plant Production with Woody Plant Production

John L. Machen, Jr.
Mobjack Nurseries, HCR 75, Box 322, Mobjack, Virginia 23118

INTRODUCTION

Growing a mixture of woody ornamentals, perennials, and annuals is our response to the public's desire for year-around color. By broadening our product line, we have been able to increase sales, extend our shipping season, and use our labor resources and growing area more efficiently.

We are growing upright hollies, unusual conifers, and small trees in about 100 acres of field production. In 15 acres of container production, we have an assortment of woody ornamentals, perennials, water plants, annuals, and ornamental grasses. In contrast to most nurseries, we do not raise any azaleas, Japanese hollies, or junipers. We strive to offer a mix of varieties that add color and excitement to the landscape all year long.

This paper will summarize some of the efficiencies and challenges of meshing perennials and woody ornamentals during propagation, planting, growing, selling, and shipping.

PROPAGATION

The same propagation facilities are used to root softwood perennial cuttings in the spring and woody cuttings in the fall. The greenhouses are equipped with raised benches, a mist system, bottom heat, and a fan for ventilation.

Our philosophy for rooting perennials is to stick the softest cuttings available, root them quickly, and pot them up without letting them lose growing momentum. To accomplish this, cuttings are made from vigorous shoots from the crop already in production. This practice not only generates strong, healthy cuttings but also helps promote branching and uniformity in the crop about to be sold. Wiss Quick Clip finger snips are ideal for cutting the small tender shoots. The cuttings are quick dipped in a .25% solution of KIBA and stuck 50 each in a 1020 flat. The trays are filled half full with rooting medium and then topped off with 1/2 inch of perlite. The perlite helps reduce the infection and spread of fungus by forming a sterile barrier between the medium and the tender foliage. Once rooted, the plants are shifted from the flats to pots with a hand trowel. A clump of rooting medium is moved with the new plants so fewer roots are disturbed and transplant shock is minimized.

Woody cuttings are direct stuck into 3-in. peat pots or plastic trays in the fall, rooted during the winter and planted in the spring. Often three cuttings are placed in each pot to produce a heavy liner more quickly.

Ornamental grasses, hosta and daylilies are propagated by division from stock in the nursery. This helps ensure the divisions will be fresh, true to name, and available when needed.

Propagation of these three crops is scheduled around peak shipping times, thus spreading the work load and requiring fewer people on the payroll.

In January ornamental grass is forced in a greenhouse so it can be divided during cold wet weather and be ready to plant in the spring. We have found a short-blade handsaw with coarse teeth is a safe and effective tool for cutting the tough fibrous roots. Once separated, the divisions are potted into 3-inch peat pots and grown in a heated house (65F) until spring planting.

Hosta divisions are made two times during the year. The majority of the crop is divided in June and July, just after the preceding crop has been shipped and space is available. This works well because the same growing area is used for the next year's crop and the crew can work in the shade during hot weather.

Containerized plants from our production are divided using handsaws and knives. In early spring the largest plants are selected and set aside as stock. It is a challenge to keep the sales manager and shipping crew out of them! If the eye is very large, it is cut in half and pulled apart to yield another division. The tops are left on the divisions to keep the plants growing so they fill the pots with roots by fall.

Since they do not grow as well in the heat, the large-leaved cultivars like *Hosta sieboldii* are divided in the winter. It is also easier to cut the crowns without foliage. Whenever the weather is too unpleasant to work outside, the divisions are separated, packed in bulb crates, and stored until spring when they are planted.

Daylilies are divided immediately after the hosta. The stock is grown on raised beds in soils that are too poorly drained to raise other field stock. The beds are drawn and fumigated with methyl bromide before planting. After two growing seasons, the daylilies are lifted with a U-blade and brought to the container area to be divided. This also is done in the shade to give the crew some relief from the summer heat.

Propagation of woodies and perennials is scheduled so there is a progression of crops to be planted from spring to fall.

PLANTING

For most crops the pots are filled and laid out in beds during slow shipping times. Later, when the liners are ready, hand trowels are used to plant the pots. This takes advantage of available labor and makes planting much easier and faster. The type of crop dictates the pattern in which the pots are set. Pots for most woodies are set jammed, pots for ornamental grasses are set in hedge rows, and pots for fast growing perennials are set spaced.

The same medium is used for almost all the container-grown plants. It consists of 6 aged pine bark : 1 coarse filter sand (v\v) and 4 lb dolomitic lime per cubic yard. The potting machine built by the nursery mixes the medium as it fills the pots.

Planting is scheduled throughout the year to take advantage of growing areas as they become available and to provide the sales department with a constant fresh supply of blooming plants. Multiple crops of the same plant are grown to mature at different times of the year.

GROWING

Herbicide compatibility, water requirements, and fertilizer needs determine where we locate crops in the nursery. Several herbicides used on woody ornamentals are not labeled for and are not safe to use on many perennials. Woodies and perennials are generally not grown in the same zones. Some perennials cannot stand as much water as other plants in the nursery, so they

are grouped and watered less or grown in drier wind-swept areas. Heavy feeders and light feeders are grown and fertilized separately to accommodate their needs.

The nursery is liquid fed with VT 1 and VT 3 almost every time it is irrigated. These two formulations, developed by Virginia Tech, are used to supply all the macro- and micronutrients. Most of the runoff water is caught in ponds, chlorinated, and recycled. To keep fertility at the desired level, soluble salts are monitored, and the injector is modified often. During some times of year lighter feeders like hosta receive enough nutrients from the recycled water and do not require additional fertilizer.

Like woody ornamentals, certain perennials require spreading and trimming to develop good quality plants. The difference is that perennials tend to grow faster and are less patient when they need more room. Good air circulation and adequate space are the keys to producing stocky, healthy plants.

Grouping plants with similar needs helps to coordinate tasks and manage growing condition.

SELLING

Having a combination of perennials and woody ornamentals in the product mix has allowed the sales department to offer our customers color almost all year.

Every week a "Looking Good List" is sent out highlighting the plants which are in bloom for that week. Buyers from several departments of large companies are often involved. Their combined needs usually add up to a larger order that can be delivered at one time.

The expanded product line has increased sales and improved service to our customers by encouraging more frequent deliveries.

SHIPPING

The nursery owns semitrailers, which are fitted with removable shelves. By varying the configuration of the shelves, a mixture of different sized material can be shipped without being stacked or crushed. Large B & B material is often laid down so several layers of perennials and other small plants can be shelved on top of it. At times it is a puzzle to figure out how to fit the orders together. With more plant material on a truck, the delivery cost per plant is reduced for our customers.

CHALLENGES

One of our greatest challenges is providing the ideal growing conditions for such a broad range of plants. Often the needs of one plant are compromised by the needs of another.

We must constantly monitor demand in the marketplace to keep production in line.

Combating weeds is another challenge. Several preemergent herbicides are being tried on our combination of crops, but a lot of hand weeding is still required.

The greatest challenge to our industry is helping our customers learn to combine perennials with woody ornamentals in the landscape.

CONCLUSION

Meshing perennials into our production has expanded our customer base and increased our sales, especially into the summer months. It has helped us offer our customers better service and has increased the efficiency of our production and labor resources.

My only frustration is with so much to do in the winter, I barely have time to go snow skiing.