

The brush is pushed up into large piles. When the piles reach a certain size we out-source a tub grinder to reduce the piles. The tub grinder turns the brush into a coarse wood chip product, which then needs to be composted before it is ready for use.

## COMPOST USED AT WESTON NURSERIES

### Container Soil Mixes.

- Shrub mix: bark, compost, and sand (3 : 1 : 1, by volume)
- Ericaceous mix: bark, compost, and stone chips (4 : 1 : 1, by volume).

**Field Operations.** Compost is applied at a rate of 135 yards per acre. This is equivalent to a depth of 1 inch.

### Bulk Sales.

- Wholesale customers.
- Retail customers.

---

## Six-row Perennial Planter

### Paul Zelenka Jr.

Zelenka Nursery Inc., 16127 Winans St., Grand Haven, Michigan 49417-0001 U.S.A.

In 1998 Zelenka Nursery Inc. met with Holland Transplanter of Holland, Michigan, to design a mechanical means of planting bare-root perennial divisions. Up to this point we had only had limited success with our transplanter. Holland Transplanter and the Zelenka staff met several times and through trial and error came up with a 6-row planter which met our needs.

The planter was needed to plant hosta, daylilies, grasses, peony, and astilbe but still be flexible enough to plant *Taxus* rooted cuttings, *Buxus* cells, and even seedlings if required. This flexibility was a must after speaking with many growers who had perennial planters gathering dust. Also the bed width needed to fit our land use, harvest equipment, pruning riggs, and spray equipment. The biggest obstacles were: a pocket which could grip a small or nonexistent stem and the irregular shape of many root systems. A pocket was designed with a rubber yoke to hold a division below the soil level. Also two metal fingers supported the roots and guided them into the soil. The irregular root shape was accommodated by a wider and deeper shoe.

Other amenities were also added: larger bins and a shelf to hold reserve plants, hydraulic wheels to adjust for uneven beds and to aid in transporting, bench seats to accommodate taller workers, two heavy duty counters, and soil guides to ensure even soil packing.

After almost a year of talking and planning we took delivery in March 1999. After working out a few bugs this machine increased our planting rate in excess of 125% over hand planting of perennials. It has also increased our units per acre from 35,000 to 50,000 units per acre. It has allowed us to mechanically plant 95% of our bare-root divisions. About 5% are still hand planted due to severely irregular root shapes. *Taxus*, *Buxus*, and seedlings planted without a hitch.

In conclusion, this planter has met our expectations and will for many years to come. I would like to thank Victor Villadsen, Judy Tourner, Jamie Hernandez, and the staff at Holland Transplanter in the preparation of this poster display.

Six-row planter specifics:

- Manufacturer: Holland Transplanter
- Uses: Plants a wide variety of bare-root perennials and rooted cuttings.
- Dimensions: 221 inches long × 100 inches wide
- Spacing: 6 rows 10 inches × 9.5 inches (can be adjusted by adding or removing pockets) 60-inch bed
- Units per acre: 50,000
- Units per hour: 2450 to 2800
- Tractor: 65 hp or larger with stepped-down transmission
- People: 8
- Cost: 14,500 (Tractor not include)
- Comments: Designed to plant bareroot perennials. Prior to this unit most perennials were hand planted. Planting rate has improved 125%.

---

## Plant Propagation Education — A Community College Approach

### Normand Hotte

Algonquin College, 1385 Woodroffe Ave., Nepean Ontario K2G 4V8 Canada

We are a community college in Nepean, Ontario, Canada (near Ottawa — Canadian Zone 5a) that offers a 2-year Diploma course in Horticulture and Landscaping. Our students graduate as Horticulture Technicians. Although much of the nursery business is conducted in the southern regions of our province, we do not overlook this aspect of horticulture in training and educating our students, as many of them will venture to seek employment in the larger nurseries after graduating. Thus, our approach to training students in the field of plant propagation focuses primarily on the nursery industry in eastern North America.

Although the plant propagation course is conducted in the winter semester of the first year, attention is given to propagation throughout the 2-year program in courses such as Herbaceous Plants 1 and 2, Woody Plants 1 and 2, and Greenhouse Applied 1 and 2. As students become familiar with plant identification, they are also taught cultural requirements including specific propagation techniques of the plants. For example, during a Woody Plants 1 class, *Caragana arborescens* 'Pendula' will be talked about as being a grafted plant, and the terminology of grafting is first introduced. Later in the plant propagation class, grafting of ornamental trees and shrubs will be shown in class through the use of slides taken at various nurseries throughout southern Ontario and Eastern United States. The students will then perform various styles of grafting in the propagation lab and grow the propagated plants in the greenhouse until time to plant in the nursery. Much of the grafting that we do is on *Malus* rootstock, where we bud ornamental crabapple cultivars by either