

## **The Plant Introduction Program of Chicagoland Grows<sup>®</sup>, Inc.**

### **Don M. Brennan**

Chicagoland Grows<sup>®</sup>, Inc., 1000 Lake-Cook Road, Glencoe, Illinois, 60022

### **Kris R. Bachtell**

The Morton Arboretum, 4100 Illinois Route 53, Lisle, Illinois 60532-1293

### **INTRODUCTION**

In recent years, there has been an increased level of interest among the green industry in the development and activities of regional plant introduction programs. A number of botanic gardens, arboreta, academic institutions, and public as well as private research facilities, have joined forces with the nursery industry to select and introduce new plant cultivars for the landscape.

Following in the footsteps of recognized plant introduction programs at the University of British Columbia Botanical Garden in Vancouver, Canada, and the University of Minnesota Landscape Arboretum in Chanhassen, Minnesota, two botanical institutions and the nursery industry in the Chicago area have established a successful plant introduction program called Chicagoland Grows<sup>®</sup>.

The Program's mission is to introduce new and recommended plant cultivars that are well adapted to growing conditions of the Upper Midwest.

### **PROGRAM HISTORY**

In March of 1986, Dr. Roy L. Taylor, Director of the Chicago Botanic Garden, initiated discussions with representatives from The Morton Arboretum and the Ornamental Growers Association of Northern Illinois (OGA), to develop a plant introduction program for the Chicago region. Following a series of planning and organizational meetings, a nonprofit corporation, Chicagoland Grows<sup>®</sup>, Inc., was established among the three partners. This unique collaboration combined the resources and research facilities of the two botanical institutions, with the knowledge and growing experience of 18 field and container production nurseries located within an 176 km (80 mile) radius of Chicago.

In addition to the partnership with OGA, the program currently works with a network of 10 contract liner producers in four states, and 41 licensed growers in 19 states, for the production and sale of plants approved for release. In 1999, the program will finalize a formal agreement with Selection New Plants (SNP), a consortium of growers based in D'Anjou, France, for the sale and sublicensing of released plants in the United Kingdom and Western Europe.

### **PROGRAM STRUCTURE AND INTERNAL OPERATIONS**

Representatives from the three corporate partners participate on the Executive Committee and operational committees. The Executive Committee is responsible for establishing policies and providing overall program management. The other committees (Research and Development, and Production and Scheduling) are

responsible for selecting potential new plants, and systematically reviewing their progress through all phases of evaluation and production, until approved for release. Eligible new releases are registered with the Federal Patent and Trademark Office, followed by the assignment of royalty and marketing fees. All income generated from the sale of registered plants is used to support the Program's operating expenses.

### **PLANT SELECTION, EVALUATION, AND PRODUCTION**

In order for a plant to be considered by the Program, its origin, history, and general characteristics must be documented prior to review by the operational committees. If a plant is approved by the operational committees, it is assigned an accession number and propagated for initial distribution to a network of ten regional evaluation cooperators. Evaluation sites are concentrated in Illinois, Iowa, Minnesota and Wisconsin, where the plant is tested under a range of conditions.

Upon completion of the initial evaluation phase, stock plants are distributed to contract liner producers to determine the most efficient and economical propagation methods for large-scale production. Liners produced by these nurseries are then sold to OGA members and licensed growers. As finished stock inventories are established among licensed nurseries, a final committee review is completed, and the plant is assigned a market release date.

### **PROMOTION AND MARKETING**

Once a market release date is established, a promotional schedule and marketing plan are developed. Although testing has ensured that the plant is worthy of introduction, the potential customer must be educated about its attributes and uses. This is accomplished through publication of *Plant Release Bulletins*, articles, and ads in trade publications, promotion at regional trade shows and field days, and presentations at conferences, seminars, and educational workshops for wholesale and retail merchandisers. The marketing goal is to pique consumer interest when large quantities of the plant are available, promoting a rapid and thorough distribution of the plant. As more consumers become aware of the plant's attributes and uses in the landscape, demand increases; growers in turn will be able to justify increased production to meet the demand.

### **RECOMMENDED PLANTS FOR THE SOUTHERN UNITED STATES**

To date, the program has released and promoted nine plants. An additional 18 plants have met the standard for release and promotion, but market release dates have yet to be assigned. Based upon evaluation data and observations of performance under nursery and landscape conditions, the following Chicagoland Grows® plants are recommended for use in the southern U.S.A.

### **CURRENT PLANT INTRODUCTIONS (PLANT RELEASE BULLETINS ARE AVAILABLE)**

***Acer ×freemanii* 'Marmo' (Marmo Freeman maple).** Marmo was selected from the collections of The Morton Arboretum, Lisle, Illinois. Characteristics include a vigorous growth rate, a strong central leader, excellent branching character, and a uniform upright habit. Fall color is an interesting mottled blend, ranging from

combinations of red and green, to burgundy, yellow, and gold, depending on temperature changes and site conditions. Marmo is being promoted as a more ornamental and desirable alternative to *A. saccharinum*, and a more adaptable alternative, in heavy clay soils, to most cultivars of *A. rubrum*. The parent tree, planted at The Morton Arboretum in the mid-1920s, measured 21 m (70 ft) in height with a 10.5 m (35 ft) lateral spread.

***Betula nigra* 'Little King', Fox Valley<sup>®</sup> river birch.** Selected by King Nursery, Oswego, Illinois, for its uniform compact habit, adaptability to varied soils, good heat/drought tolerance and disease/pest resistance, and ornamental exfoliating bark. Bark character becomes evident at an early age, exhibiting colorful patterns of cinnamon-red, and pale salmon on trunks and main branches. Grows 2.4 to 3 m (8 to 10 ft) in height with an equal or greater lateral spread in 10 years.

***Buxus* 'Glencoe', Chicagoland Green<sup>®</sup> boxwood.** Selected by the Chicago Botanic Garden, Glencoe, Illinois, for excellent cold-hardiness, a uniform broad-oval habit, good winter color, and ease of propagation. Grows 0.9 to 1.2 m (3 to 4 ft) in height with a 1.5 m (5 ft) lateral spread in 15 years.

***Euonymus alatus* 'Timber Creek', Chicago Fire<sup>®</sup> euonymus.** Selected by Timber Creek Nursery, Woodstock, Illinois, for excellent cold-hardiness and heat/drought tolerance, fine-textured branching, and bright red fall color. As the plant matures, young twigs and branch tips become an attractive mahogany-red. Established landscape specimens often produce abundant quantities of ornamental orange-red fruit, lasting into early winter. Grows 8 to 10 ft (2.4 to 3 m) in height with a 1.8 to 2.4 m (6 to 8 ft) lateral spread in 15 years.

***Fraxinus americana* 'Tures', Windy City<sup>™</sup> white ash.** Selected by Matt Tures Sons Nursery, Huntley, Illinois, for its uniform upright habit and resistance to frost-cracking. Other attributes include a strong central leader, attractive semi-glossy foliage, and good fall color. Fall color is an attractive blend of bronze and burgundy, highlighted by copper, orange, gold, and yellow accents. The upright habit provides for a greater range of landscape applications due to reduced branch spread. Mature size is estimated at 12.2 to 15.2 m (40 to 50 ft) in height with a 7.6 to 9.1 m (25 to 30 ft) lateral spread.

### **Arrowwood Viburnum Selections**

All three selections were made by Ralph Synnestvedt, Sr., of the Synnestvedt Nursery Company, Round Lake, Illinois. Arrowwood viburnums grown from seed are highly variable. Our clonal selections are consistent in form and ornamental attributes.

***Viburnum dentatum* 'Morton', Northern Burgundy<sup>®</sup> arrowwood viburnum.** Selected for its uniform oval-rounded habit, attractive foliage, strong branching, and wine-red to burgundy fall color. Creamy white flowers appear in early to mid-June, followed by ornamental clusters of blue-black fruit in autumn. Extremely wet sites should be avoided. Grows 2.4 to 3 m (8 to 10 ft) in height with an equal lateral spread in 10 years.

***Viburnum dentatum* 'Ralph Senior', Autumn Jazz<sup>®</sup> arrowwood viburnum.** Selected for its uniform upright-oval habit, and an impressive kaleidoscope blend of

yellow, orange, red, and burgundy fall colors. Creamy white, flat-topped flowers appear in mid-to-late May, followed by ornamental clusters of blue-black fruit in autumn. Exhibits excellent adaptability to a broad spectrum of soil types. Grows 2.4 to 3 m (8 to 10 ft) in height with a 1.8 to 2.4 m (6 to 8 ft) lateral spread in 10 years.

***Viburnum dentatum* ‘Synnestvedt’, Chicago Lustre® arrowwood viburnum.** Selected for its upright, round habit, and glossy dark green foliage. Creamy white flowers appear in mid-to-late June, followed by ornamental clusters of blue-black fruit in autumn. Extremely wet sites should be avoided. Grows 3 to 3.6 m (10 to 12 ft) in height with an 2.4 to 3 m (8 to 10 ft) spread in 10 years.

#### LIMITED RELEASES (MARKET RELEASE DATES TO BE ANNOUNCED)

***Acer miyabei* ‘Morton’, State Street® Miyabe maple.** Selected from the collections of The Morton Arboretum, Lisle, Illinois, for excellent branching character, a uniform broad-pyramidal habit, excellent heat/drought tolerance, clean foliage, and good yellow fall color. The parent tree, planted at The Morton Arboretum in the 1920s, measures 18 m (60 ft) in height with a 15 m (50 ft) spread at the base. This selection is a more cold-hardy alternative to *A. campestre* in northern growing conditions, and a more heat/drought resistant alternative to *A. platanoides*.

***Diervilla rivularis* ‘Morton’, Summer Stars™ Georgia bush-honeysuckle.** Selected from the collections of The Morton Arboretum, Lisle, Illinois, for its dense, compact habit, and an impressive display of sulfur-yellow flowers in late June to early July. Fifteen-year-old plants are 0.9 m (3 ft) in height with a 1.2 m (4 ft) lateral spread.

***Malus* ‘Hub Tures’, Spring Sensation™ crabapple.** Selected by Hub Tures & Sons Nursery, Kingston, Illinois, from open-pollinated *M. sargentii*. Characteristics include a dense, wide-spreading habit, excellent disease resistance, dark rose to rose-magenta flower buds, abundant pink-tinted flowers (with excellent weather resistance), and attractive red-tinted foliage. Fruit production is minimal to none. Grows 2.4 to 3 m (8 to 10 ft) in height with a 3 to 3.6 m (10 to 12 ft) lateral spread in 15 years.

***Rhus copallina* var. *latifolia* ‘Morton’, Prairie Flame™ shining sumac.** This male clone was selected from the collections of The Morton Arboretum, Lisle, Illinois, for its dwarf compact habit, clean glossy foliage, attractive yellowish-white flowers in late July, and brilliant red-orange fall color. The parent plant originated from seed collected in the Iroquois County Conservation Area, near the Illinois/Indiana border. Matures at 1.2 to 1.8 m (4 to 6 ft) in height, spreading laterally from the roots, forming dense colonies.

***Ulmus* ‘Morton’, Accolade™ elm.** Selected from the collections of The Morton Arboretum, Lisle, Illinois, for its graceful vase-shaped habit, vigorous growth rate, dark green glossy foliage, excellent disease and pest resistance, excellent drought tolerance, and good yellow fall color. The parent tree, known to be a hybrid of *U. japonica* × *U. wilsoniana*, measures 18.2 m (60 ft) in height with a 12.2 m (40 ft) lateral spread. This clone originated from seed distributed in 1924 by the Arnold Arboretum, Boston, Massachusetts.

***Ulmus* 'Morton Glossy', Triumph™ elm.** This selection resulted from a controlled cross conducted by Dr. George Ware at The Morton Arboretum between Vanguard™ elm and Accolade™ elm. Attributes include lustrous dark green foliage, good upright form, strong branching, and excellent disease and pest resistance.

***Viburnum rufidulum* 'Morton', Emerald Charm™ viburnum.** Selected from the collections of The Morton Arboretum, Lisle, Illinois, for its cold-hardiness, glossy foliage, excellent flower display, and superb burgundy fall color. This clone originated from seed collected in Webb City, Missouri. Mature size is 3 to 3.6 m (10 to 12 ft) in height with an 2.4 to 3 m (8 to 10 ft) lateral spread.

### **FUTURE GROWTH OF THE PROGRAM**

In order for the Program to achieve long-term growth and expansion into new markets, it must diversify the palette of new plants being offered. To accomplish this, breeding programs have been established with herbaceous perennials at the Chicago Botanic Garden (*Baptisia*, *Boltonia*, *Echinacea*, *Liatris*, and *Penstemon*), and with the woody plant breeding program at The Morton Arboretum, which has expanded to include small stature trees (primarily *Ulmus* and *Acer*), suitable for street and parkway plantings. Another important component of long-term goals involves the selection and eventual introduction of new plants from collecting trips. Thus far, the Chicago Botanic Garden has participated in trips to South Korea, Siberia, and Far East Russia. The Morton Arboretum has participated in the previously mentioned trip to Siberia, as well as several trips to the People's Republic of China.

The ultimate goal is a timely and regular introduction of a palette of groundcovers, perennials, trees, and shrubs with excellent adaptability and ornamental attributes for the landscapes of the Midwest and beyond.