

The Top Performing Plants from the Evaluation and Breeding Programs at Chicago Botanic Garden[®]

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INTRODUCTION

The Chicago Botanic Garden's programs in plant breeding, evaluation, and introduction are dedicated to the development, assessment and recommendation, and introduction of ornamental plants for landscape and garden use in the Midwestern U.S.A. The goals, structure, and history of the plant introduction program, Chicagoland Grows[®], Inc., were previously presented (Brennan and Bachtell, 1998), as were those of the plant breeding and evaluation programs (Ault and Hawke, 2000). This presentation will highlight the top performing ornamental plants from the evaluation and breeding programs, and therefore plants that we are recommending for use in the Midwest. These plants were all grown at Chicago Botanic Garden in a clay loam soil, pH neutral to alkaline, USDA Zone 5B.

RECOMMENDATIONS FROM THE PLANT EVALUATION PROGRAM

This program formally evaluates a range of perennials, vines, shrubs, and small trees in a landscape setting. Data is collected on 26 plant characteristics such as bloom longevity, disease resistance, hardiness, etc., throughout the growing season. The plants are evaluated for a minimum period (typically 4 years for perennials for example), then the results are summarized over the duration of the trial. The largest component of the program is the comparative evaluation of commercially available, targeted taxa such as *Clematis*, *Geranium*, *Monarda*, etc. Upon completion of the evaluation, a written report, *Plant Evaluation Notes*, a periodic publication of the Chicago Botanic Garden, is disseminated to about 5000 botanical institutions, universities, extension agencies, landscape companies, nurseries, and gardeners. Table I summarizes many of the best performing plants from previously completed trials, and from some of the current trials nearing completion. More information on many of these taxa is available in the previously released *Plant Evaluation Notes*.

RECOMMENDATIONS FROM THE PLANT BREEDING PROGRAM

The breeding program is developing new ornamental plants, focusing on both herbaceous perennials and on selected woody taxa. The plants in the breeding program are not evaluated as comprehensively as are the plants in the evaluation program with its weekly collection of data on 26 plant characteristics, due to the practicality of collecting such extensive data on thousands of seed-grown plants, and that most of the plants in the breeding program are maintained for only 1 to 3 years. However, over the history of the breeding program, a number of plants have performed well, and in fact have become cornerstone plants in the breeding program. Table 2 lists the commercially available, herbaceous taxa that have performed the best from the target genera of the breeding program at Chicago Botanic Garden.

REFERENCES CITED

- Ault, J.** and **R. Hawke.** 2000. Breeding and evaluation of perennials at Chicago Botanic Garden. Comb. Proc. Intl. Plant Prop. Soc. 50:337-340.
- Brennan, D.** and **K. Bachtell.** 1998. The plant introduction program of Chicagoland Growers®, Inc. Comb. Proc. Intl. Plant Prop. Soc. 48:590-594.
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Table 1. Top rated ornamental taxa from the plant evaluation program at Chicago Botanic Garden.

Achillea 'Apfelblüte' (Appleblossom)
Achillea 'Citronella'
Achillea 'Coronation Gold'
Achillea 'Fornsett Fletton'
Achillea 'Hoffnung'
Achillea 'Jambo'
Achillea 'Lachsschönheit' (Salmon Beauty)
Achillea 'Moonshine'
Achillea 'Pfirsichblüte' (Peach Blossom)
Achillea 'Sawa Sawa'
Achillea 'Wesersandstein' (Weser River Sandstone)
Achillea filipendulina 'Gold Plate'
Achillea filipendulina 'Parker's Variety'
Achillea millefolium 'Fire King'
Achillea millefolium 'Lilac Beauty'
Achillea millefolium 'Rosea'
Achillea millefolium 'Rosy Red'
Achillea ptarmica 'Angel's Breath'
Achillea ptarmica 'Perry's White'
Achillea ptarmica The Pearl Group (syn. 'The Pearl')
Achillea sibirica var. *camschatica*
Achillea tomentosa 'Aurea' (syn. 'Maynards Gold')
Amsonia hubrichtii
Amsonia 'Blue Ice' (syn. WFF Select)
Anemone xhybrida 'Andrea Atkinson'
Anemone xhybrida 'Max Vogel'
Anemone hupehensis var. *japonica* 'Bressingham Glow'
Artemisia absinthium 'Lambrook Silver'

- Artemisia lactiflora* Guizho Group
Artemisia ludoviciana 'Valerie Finnis'
Campanula 'Kent Belle'
Campanula 'Sarasro'
Campanula takesimana
Campanula takesimana 'Elizabeth'
Clematis 'Ascotiensis'
Clematis 'Barbara Jackman'
Clematis 'Bee's Jubilee'
Clematis 'Betty Corning' (syn. *C. viticella* 'Betty Corning')
Clematis 'Bill MacKenzie'
Clematis 'Comtesse de Bouchaud'
Clematis 'Countess of Lovelace'
Clematis 'Dawn'
Clematis 'Elsa Späth'
Clematis 'Ernest Markham'
Clematis 'Etoile Violette' (syn. *C. viticella* 'Etoile Violette')
Clematis 'Evirin' (syn. 'Blue Moon')
Clematis 'Gipsy Queen'
Clematis 'Guernsey Cream'
Clematis 'Hagley Hybrid'
Clematis 'Haku-ôkan' (syn. 'Haku Ookan')
Clematis 'Lady Betty Balfour'
Clematis 'Madame Baron Veillard'
Clematis 'Madame Edouard André'
Clematis 'Madame Julia Correvon' (syn. *C. viticella* 'Madame Julia Correvon')
Clematis 'Marie Boisselot'
Clematis 'Mrs. Cholmondeley'
Clematis 'Mrs. P.B. Truax'
Clematis 'Mrs. Robert Brydon' (syn. *C. xjouiniana* 'Mrs. Robert Brydon')
Clematis 'Nelly Moser'
Clematis 'Pagoda'
Clematis 'Perle d'Azur'
Clematis 'Rouge Cardinal'
Clematis 'Södertälje' (syn. *C. viticella* 'Södertälje')
Clematis 'The President'

- Clematis* 'Ville de Lyon'
Clematis 'Vyvyan Pennell'
Clematis alpina 'Pamela Jackman'
Clematis macropetala
Clematis recta
Clematis × *durandii*
Clematis × *jouiniana* 'Praecox'
Echinacea paradoxa
Echinacea purpurea 'Leuchstern' (syn. 'Bright Star')
Echinacea purpurea 'White Lustre'
Echinacea tennesseensis
Epimedium grandiflorum 'Crimson'
Epimedium grandiflorum 'Rubinkrone'
Epimedium sempervirens 'Vega'
Epimedium × *versicolor* 'Neosulphureum'
Geranium 'Blue Cloud'
Geranium 'Brookside'
Geranium 'Nimbus'
Geranium 'Vital'
Geranium macrorrhizum 'Czakov'
Geranium macrorrhizum 'Lohfelden'
Geranium × *cantabrigiense* 'St. Ola'
Geranium × *oxonianum* 'Rebecca Moss'
Hibiscus 'Candy Stick'
Hibiscus 'Sleeping Beauty'
Hibiscus moscheutos 'Crimson Wonder'
Hibiscus moscheutos 'Pink Giant'
Hibiscus moscheutos 'Poinsettia'
Hibiscus moscheutos 'Super Rose'
Hibiscus moscheutos 'The Clown'
Liatris pycnostachya
Liatris pycnostachya 'Alba'
Liatris pycnostachya 'Alexander'
Liatris spicata 'Alba'
Liatris spicata 'Floristan Violet'

- Liatris spicata* 'Floristan Weiss' (syn. *L. spicata* 'Floristan White')
- Liatris spicata* 'Kobold'
- Monarda* 'Blaukranz' (Blue Wreath)
- Monarda* 'Colrain Red'
- Monarda* 'Falls of Hills Creek'
- Monarda* 'Gardenview Scarlet'
- Monarda* 'Jacob Cline'
- Monarda* 'Marshal's Delight'
- Monarda* 'Ohio Glow'
- Monarda* 'Petite Delight'
- Monarda* 'Raspberry Wine'
- Monarda* 'Rose Queen'
- Monarda* 'Violet Queen'
- Nepeta* 'Veluws Blauwtje'
- Nepeta racemosa* 'Walker's Low' (syn. *N. xfaassenii* 'Walker's Low')
- Nepeta subsessilis*
- Phlox divaricata* subsp. *laphamii* 'Chattahoochee'
- Phlox maculata* 'Reine du Jour' (syn. *P. carolina* 'Reine du Jour')
- Phlox paniculata* 'Bright Eyes'
- Phlox paniculata* 'David'
- Phlox paniculata* 'Franz Schubert'
- Phlox paniculata* 'Inta'
- Phlox paniculata* 'Katarina' (syn. 'Katherine')
- Phlox paniculata* 'Kraftprotz'
- Phlox pulchra* 'Morris Berd'
- Pulmonaria* 'Little Star'
- Pulmonaria* 'Roy Davidson'
- Pulmonaria* 'Tim's Silver'
- Pulmonaria officinalis* 'White Wings' (*P. saccharata* 'White Wings')
- Rosa* 'Assiniboine'
- Rosa* 'Ausblush', Heritage Austin rose
- Rosa* 'Ausmary', Mary Rose Austin rose
- Rosa* 'Ausreeve', The Reeve Austin rose
- Rosa* 'Austance', Constance Spry Austin rose
- Rosa* 'Blush', Morden Blush rose

- Rosa* 'Champlain'
Rosa 'Dabler', Knock Out® floribunda rose
Rosa 'Henry Kelsey'
Rosa 'Jens Munk'
Rosa 'John Davis'
Rosa 'Morden Centennial'
Rosa 'Susemi, Lucetta Austin rose
Rosa 'William Baffin'
Rosa rugosa 'Alba-Plena'
Rudbeckia 'Goldquelle' (syn. *R. laciniata* 'Goldquelle')
Rudbeckia 'Herbstsonne' (syn. *R. nitida* 'Herbstsonne')
Rudbeckia fulgida var. *speciosa* (syn. *R. newmanii*)
Rudbeckia fulgida var. *sullivantii*
Rudbeckia fulgida var. *sullivantii* 'Goldsturm'
Rudbeckia maxima
Rudbeckia subtomentosa
Rudbeckia triloba
Salvia koyamae
Salvia verticillata 'Purple Rain'
Salvia x sylvestris 'Mainacht' (May Night)
Salvia x sylvestris 'Wesuwe' (Vesuvius)
Solidago 'Baby Sun'
Solidago 'Goldkind'
Solidago 'Laurin'
Solidago flexicaulis 'Variegata'
Solidago rigida
Solidago rugosa 'Fireworks'
Solidago sphacelata 'Golden Fleece'
Stachys macrantha 'Robusta'
Stachys monieri 'Hummelo'
Stachys officinalis
Thalictrum aquilegifolium
Thalictrum minus subsp. *minus* (syn. *T. flexuosum*)
Thalictrum rochebrunianum
Thalictrum simplex
Tricyrtis 'Sinonome'

Tricyrtis 'Tojen'
Tricyrtis 'White Towers' (syn. *T. hirta* 'White Towers')
Tricyrtis formosana
Tricyrtis hirta
Tricyrtis hirta 'Miyazaki Gold'
Tricyrtis hirta 'Miyazaki'
Tricyrtis hirta 'Variegata'
Tricyrtis latifolia
Tricyrtis macropoda
Veronica 'Minuet'
Veronica 'Pink Damask'
Veronica austriaca 'Ionian Skies'
Veronica peduncularis 'Georgia Blue'
Veronica prostrata 'Trehane'
Veronica spicata 'Blue Peter'
Veronica spicata 'Icicle'

Table 2. Recommended taxa from the plant breeding program at Chicago Botanic Garden.

Asclepias incarnata
Asclepias tuberosa
Baptisia australis
Baptisia bracteata (syn. *B. leucophaea*)
Baptisia sphaerocarpa
Echinacea purpurea cvs.
Echinacea tennesseensis
Liatris pycnostachya cvs.
Liatris spicata cvs.
Penstemon 'Prairie Dusk'
Penstemon digitalis
Penstemon grandiflorus
Penstemon hirsutus
Penstemon Mexicali hybrids (syn. *P. ×mexicali*)
Penstemon strictus