

2011 ASCFG PERENNIAL & WOODY TRIALS

JOHN M. DOLE AND JUDY M. LAUSHMAN

The favorite perennial this year was rudbeckia 'Henry Eilers' (Terra Nova). With its quirky quilled petals and long, strong, easy-to-cut stems, this flower has many admirers. Plants are productive, yielding an average of 20 stems each that were a little over 2½ feet long. Some trialers cut up to 33 stems per plant, and others up to 45-inch stems. 'Henry Eilers' starts producing quickly; marketable stems were harvested from first-year plants, averaging twelve 23-inch stems per plant. Growers also noted the lack of problems with this vigorous cultivar.

Equally productive was *Lecantherum* 'Paladin' (Terra Nova). It produced an average of 24.7 stems that were 13½ inches long. Some folks harvested 20-inch stems. Plants generated a large

flush of flowers early in the summer and smaller numbers during the rest of the season. The white daisies have yellow centers. The outer white petals are abundant, but sometimes not fully formed.

At Ko Klaver's recommendation, we evaluated a few other perennials at NCSU which were not included in the national trial: achillea 'Pink Grapefruit' and 'Wonderful Wampee'; echinacea 'Meringue', 'Milkshake', 'Pink Double Delight', 'Sundown' and 'Sunrise'; eupatorium 'Phantom'; and phlox 'Blushing Shortwood'. Of these, the latter two really stood out. 'Phantom' was a prolific flowerer of large clusters of small rosy pink blooms that work great as filler flowers. We have tested other eupatoriums in the past and this one is notable for being shorter and easier to manage than the species and some of the enormous cultivars available. In the second year we harvested 16 stems per plant that averaged 39 inches long. Even in the first year, we were able to harvest 5 stems that averaged 25 inches long. The easy-to-grow plants are cold and heat tolerant and flowered midsummer.

The large clusters of fragrant phlox flowers are well known to many consumers. Here in the South, phloxes sometimes struggle a bit. One that has done well for us is 'Blushing Shortwood' with white flowers liberally tinged with pink. It produced two 13½-inch stems per plant the first year and nine 20-inch stems per plant the second. As with all phlox the petals tend to shatter unless treated with an anti-ethylene product.



'Blushing Shortwood'



'Phantom'

The 2010 Seed Trial included several perennials that flowered from seed the first year. One of our seed trialers, Tom Parker of Parkerhouse Nursery, overwintered the scabiosa and asclepias and reported back on the second year results. He found that all plants overwintered and scabiosa 'Fama Deep Blue' and 'Fama White' produced 10 to 15 stems and 'Perfecta White' 3 to 5 stems. 'Fama White' produced the shortest stems, around 20 inches, while 'Perfecta White' produced 19-25 inch and 'Fama Deep Blue' 21-24 inch stems. Asclepias 'Oro' produced 5 to 7 stems that were 14 to 16 inches long.



'Antique Caramel'

Black spot is a common disease of roses and there is variation among cultivars. We listed the black spot susceptibility of the cultivars in the trial (see table).

Tom reports that his planting of Kordes roses was hit hard by voles during the winter. Two inches of compost was applied to the raised beds and the compost was covered by an inch of decomposed wood chips. Bait and traps were employed to eliminate the voles. Plants recovered in the 2011 growing season, and he is anticipating good flower production in 2012.

Enough of the bad news—let's focus on the flowers. Last year at NCSU we rated each of the cultivars according to fragrance, black spot, defoliation and thorns. 'Perfumed Passion' had the strongest fragrance, closely followed by 'Mon Petit Chou' and 'Sweet Antique'. 'Party Dress' and 'Antique Caramel' had some scent, while the rest had limited fragrance. The worst for black spot was 'Toscana' and 'Antique Caramel'. The cultivars with the least black spot were 'Mon Petit Chou', 'Corrie Freeland', 'Party Dress', and 'Perfumed Passion'. Of these, all but 'Corrie Freeland' held most of their foliage by the end of the summer. However, 'Samba', 'Toscana'



'Oro'

In the Woody Trial we are in the second year of testing several of the beautiful shrub roses from Kordes. Although we started with 10 trialers, we received results only from Tom Parker, Parkerhouse Nursery in New Jersey. A big thank you to him for reporting back. All of the plants in the trial (both NCSU and Tom Parker) survived the winter, except for 'Corrie Freeland' (only 1 out of 4) and 'Honey Freeland' (3 out of 4) for Tom. Our planting developed rose rosette virus, resulting in the loss of a number of plants (see table). There is no control for this disease once plants are infected, so the only response is to thoroughly remove them. For each cultivar, we listed the number of plants that were infected by the end of the growing season, but we suspect all are sensitive to the virus as most sources report little resistance to the disease by any roses. Rose rosette virus is spread by mites, which need to be controlled to prevent spread of the disease. A good web resource is from the Virginia Cooperative Extension (pubs.ext.vt.edu/450/450-620/450-620.html).

and some of the 'Corrie Freeland' plants had lost much of their foliage. Thorniness varied quite a bit from the very thorny 'Samba' and moderately thorny 'Honey Freeland' to the almost thornless 'Corrie Freeland'. 'Perfumed Passion' and 'Antique Caramel' also had relatively few thorns.



'Mon Petit Chou'

Interpreting the trial results: The numbers reported are averages of all the respondents and many factors will affect the success of any plant species. Our participants are growing and harvesting the trial plants in a wide variety of ways. For example, with annual asters some people harvest the entire plant as one bunch while others harvest each individual flowering branch, giving very different stem lengths and yield data. After looking at the average, check the range of responses listed below each number to see how the cultivar performed at its best and its worst. If the range of responses in the ratings is narrow and high, i.e., 3-5 or 4-5, the plant was a winner for most of the respondents and is likely to do well for you. The “Repeat Again Rating” is particularly important because it indicates if the trialer would take the time, money, and space to actually grow the cultivar again. Review the trial results carefully. If a species sounds interesting but did not appear to do well, try it anyway. The cultivar may work well for you.

Acknowledgments: All cut flower growers should thank the perennial and woody plant producers for providing the plant materials and the growers for producing the plants, collecting data and submitting trial reports. The growers paid shipping expenses and agreed to provide data for at least two years. Plants were donated by perennial producers and shipped as plugs or dormant roots directly to the trialers. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials, and Brigitte Crawford, Diane Mays, Michelle McElhannon and Iftikhar Ahmad for assisting with the NCSU trials. In preparing the report we have edited the participants’ comments for space and clarity; my apologies if we’ve altered the tone or content of anyone’s comments. Thanks to everyone for making this service of the ASCFG possible.



‘Paladin’

PARTICIPATING PERENNIAL SUPPLIER

TERRA NOVA NURSERIES
10051 S. Macksburg Road
Canby, Oregon 97013
(800) 215-9450
(503) 263-3150
www.terravanurseries.com

RESPONDING PERENNIAL GROWERS

JANET BACHMANN
Riverbend Gardens
Fayetteville, Arkansas

CHRISTOF BERNAU
UCSC Farm & Garden
Santa Cruz, California

INGRAM MCCALL/JOHN DOLE
North Carolina State University
Raleigh, North Carolina

PARTICIPATING WOODY PLANT SUPPLIER

SCHULTE’S GREENHOUSE AND NURSERY
2960 LaBeaux Ave.
St. Michael, Minnesota 55376
(763) 497-3747
www.schultesgreenhouse.com

KORDES ROSES
FROM NEWFLORA LLC
972 Old Stage Road
Central Point, Oregon 97502
(541) 941-4378
www.newflora.com

RESPONDING WOODY GROWERS

INGRAM MCCALL/JOHN DOLE
North Carolina State University
Raleigh, North Carolina

TOM PARKER
Parkerhouse Nursery
Mays Landing, New Jersey

SUMMARY OF COMMENTS

The number in parenthesis refers to the number of respondents who made the comment. If no number is present, only one person made the comment. Comments by each individual are separated with a semicolon (;). Note: many respondents did not make specific comments on each cultivar and in some cases, comments have been shortened because of limited space.

2010 PERENNIAL CUT FLOWER TRIAL CULTIVAR LIST - YEAR 2

Echinacea 'Firebird' (Terra Nova)

Good Qualities: Great color! (2); Strong stems, fragrance.

Problems: Few stems per plant.

Similar Cultivars: Echinacea 'Firebird', 'Tangerine Dream'.

Postharvest Recommendations: Held in cooler at 33F.

Echinacea 'Flame Thrower' (Terra Nova)

Good Qualities: Very large, vibrant, dark redish-pink/purple flowers with stems slightly longer than other trial cultivars; Color and fragrance, strong stems, continued blooming all summer until frost, survived the summer!

Problems: Too many short stems.

Insects or Diseases: Gophers love all of our echinaceas; Leaves show what might be aster yellows virus, leaves were attacked by a huge swarm of caterpillars in late July.

Similar Cultivars: Echinacea 'Firebird', 'Tangerine Dream'.

Postharvest Recommendations: Held in cooler at 33F.

Additional Comments: Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems; Gophers love all of our echinaceas.

Echinacea 'Fragrant Angel' (Terra Nova)

Good Qualities: Our customers really liked the unique combination of slender white petals and orange and yellow cones, these worked well mixed with other late-season flowers; I love the fragrance and the green and white color! Strong stems, continued blooming all summer until frost, survived the summer!

Problems: Too many short stems, white petals bruise and show brown/black spots that destroy their marketability.

Insects or Diseases: Gophers love all of our echinaceas; Leaves show what might be aster yellows virus, several plants died out over the summer, maybe because of the virus.

Postharvest Recommendations: Held in cooler at 33F.

Additional Comments: Gophers love all of our echinaceas, compared to the standard/

medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems; Stems were longer on all echinacea cultivars in this second year, compared to the 1st year. Our customers really liked Fragrant Angel's unique combination of slender white petals and orange and yellow cones; these worked well mixed with other late-season flowers.

Echinacea 'Green Eyes' (Terra Nova)

Good Qualities: Love the bright pink color with the green center; Color and fragrance, I love the fragrance! Strong stems, continued blooming all summer until frost, survived the summer!; The light color of the centers of 'Green Eyes' was nice, but not too distinctive.

Problems: We lost several of these over the winter; Too many short stems.

Insects or Diseases: Leaves show what might be aster yellows virus, leaves were attacked by a huge swarm of caterpillars in late July after they finished eating 'Flame Thrower' leaves; Gophers love all of our echinaceas.

Postharvest Recommendations: Held in cooler at 33F.

Additional Comments: Gophers love all of our echinaceas, compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems; Stems were longer on all echinacea cultivars in this second year, compared to the first year; Similar to 'Fragrant Angel', but with a different petal color.

Echinacea 'Maui Sunshine' (Terra Nova)

Good Qualities: Nice bright yellow; Strong stems; Another relatively unique echinacea color, though our plants tended more towards orange than the yellow in the Terra Nova catalog.

Problems: Not a strong plant, I think it may have died out before the summer was over.

Insects or Diseases: Gophers love all of our echinaceas.

Postharvest Recommendations: Held in cooler at 33F.

Additional Comments: Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems.

Echinacea 'Pink Poodle' (Terra Nova)

Good Qualities: The semi-double form and slender "petals" (ray flowers) were attractive and unique; Color, strong stems.

Problems: Inconsistent stem length and flower size; Plants seemed to have health problems, I doubt that many will be left in year 3, many short stems.



'Green Eyes'

Insects or Diseases: Gophers love all of our echinaceas.

Postharvest Recommendations: Held in cooler at 33F.

Additional Comments: Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems. 2011 was the worst growing year I have ever experienced, beginning with record snowfall and record cold (February), followed by record rainfall (May), and record heat and drought (July and August). 'Henry Eilers' did well regardless.

Echinacea 'Tangerine Dream'

(Terra Nova)

Good Qualities: Great, bright orange color (2); Strong stems.

Problems: Most died during the winter, and the rest died shortly after they came out in the spring; Short, inconsistent stem length and not enough stems per plant; Didn't survive.

Insects or Diseases: Gophers love all of our echinaceas.

Postharvest Recommendations: Held in cooler at 33F.

Additional Comments: Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems.

Eucomis 'Oakhurst' (Terra Nova)

Problems: In two years in the ground, we have not yet seen a single flowering stem, original plants came in small and weak and we planted only a dozen of the original 20, lost about half of these in the first winter and going into the second winter we are down to only 3 plants, they look good but never showed any signs of flowering.

Additional Comments: Lacking flowers, we did harvest a few leaves to add to arrangements, we really liked the bronzy burgundy of the foliage and this color worked well with other elements of autumn.

Leucanthemum 'Paladin' (Terra Nova)

Good Qualities: Color, vase life; Very distinctive flowers for a Shasta-type daisy, they bloomed over a very long season, from late June onward and are still blooming now in early December, quite remarkable.

Problems: Short stems, many blossoms imperfect; Stem length can be a bit variable and never too many flowers at any one time, probably just need a larger stand to have a critical mass for each week's harvest.

Postharvest Recommendations: Held in cooler at 33F.



Rudbeckia 'Henry Eilers' (Terra Nova)

Good Qualities: Nice, long stems, pretty flower sprays; Very long stems useful for larger design work, but so prolific that cutting stems short for "regular" work hardly seemed a sacrifice, our customers really liked the delicate architecture and open lines of 'Henry Eilers'; Attractive alone or in mixed bouquets, long vase life, easy to grow with no disease or insect pest problems so far, do not need support net, plants were larger and more flower stems in second year.

Problems: None to speak of; Heavy bloom period was concentrated from mid-July through early August, with smaller clusters of flowers lasting until frost—not a bad problem, just doesn't give an abundance over a long summer season.

Insects or Diseases: None (2).

Postharvest Recommendations: Definitely benefits from clean stripping and water changes; Cut into chlorinated water, then transfer to Chrysal #2 solution, hold in cooler at about 33F.

Additional Comments: 2011 was the worst growing year I have ever experienced, beginning with record snowfall and record cold (February), followed by record rainfall (May), and record heat and drought (July and August). 'Henry Eilers' did well regardless.

2011 was the worst growing year I have ever experienced, beginning with record snowfall and record cold (February), followed by record rainfall (May), and record heat and drought (July and August). 'Henry Eilers' did well regardless.

Trial Results for Year 2 of Perennial Cultivars Planted in 2010 First row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed in the range line, either only one person responded for that category or several responded and all gave the same rating. Plants provided by Terra Nova Nurseries.

Species	Plants died over winter (%)	Plants flowering (%)	Yield stems/plant ^①	Stem length (inches) ^①	Market appreciation rating ^②	Repeat again rating ^②	Ease of cultivation rating ^②	Average Postharvest Life (days)
Echinacea	10.0	100	13.0	15.5	4.0	4.0	4.5	7
'Firebird'	10	100	10-16	8-19	4	4	4-5	7
Echinacea	20	100	26.0	15.2	3.7	3.3	4.0	9.3
'Flame Thrower'	0-40	100	5-50	3-18	3-4	3-4	3-5	7-13
Echinacea	22	100	16.3	14.7	3.7	3.3	4.0	7.5
'Fragrant Angel'	4-44	100	6-30	3-20	3-4	2-4	4-5	7-9
Echinacea	83	100	19.2	11.5	3.7	3.3	3.7	7.5
'Green Eyes'	26-60	100	2-50	3-15	3-4	3-4	3-5	7-9
Echinacea	5	100	9.7	13.0	3.3	2.7	3.0	9.0
'Maui Sunshine'	0-10	100	3-16	4-16	3-4	2-4	2-4	7-12
Echinacea	0	100	9.0	12.9	3.3	3.0	3.3	7.5
'Pink Poodle'	0	100	4-16	18-21	3-4	2-4	3-4	7-9
Echinacea	83	62	1.5	10.8	2.7	2.0	2.0	7.3
'Tangerine Dream'	20-66	0-100	1-4	8-15	1-4	1-3	1-3	7-8
Eucomis	44	25	0.5	31	3.5	3.0	3.0	15
'Oakhurst'	30-58	0-50	0-1	31	3-4	2-4	2-4	15
Leucanthemum	25	98	24.7	13.5	3.7	3.7	3.7	11.0
'Paladin'	0-50	95-100	8-40	6-20	3-4	3-4	3-4	7-14
Rudbeckia	12	99	20.0	31.5	4.7	4.7	4.7	12.3
'Henry Eilers'	0-50	98-100	9-33	20-45	4-5	4-5	4-5	8-15

① Data shown are from those respondents who harvested stems. Some respondents may not have harvested stems because they were too short. See comments section for more details.

② 1 to 5 scale, with 5 being the best.

Table 1. Cut rose trial results from North Carolina State University and Parkerhouse Nursery for 2011.

Cultivar	North Carolina State University				Parkerhouse Nursery	
	Yield stems/plant ^①	Stem length (inches) ^①	Black spot (rating) ^①	Rose rosette-associate virus ^①	Length (inches)	Grow again rating ^①
'Antique Caramel'	6	-	2.0	4	-	-
'Corrie Freelande'	0	-	4.3	3	0	5
'Honey Freelande'	12	21	3.5	4	-	-
'Mon Petit Chou'	30	21	3.0	1	8	5
'Party Dress'	16	22	1.0	4	15	5
'Perfumed Passion'	24	21	3.3	4	-	-
'Samba'	3	21	3.5	2	-	-
'Sweet Antique'	13	21	4.0	2	-	-
'Toscana'	9	21	2.8	4	18-25	5

① 1-5 rating with 5 the best.

② Number of plants remaining out of 4 plants.