

2011 ASCFG CUT FLOWER SEED TRIALS

JOHN M. DOLE AND JUDY M. LAUSHMAN

This was the year of the annual aster. We had 19 large-flowered cultivars covering the range of colors. Once one of the most important cut flower species in the United States, it was loved for its long stems, large flowers, and broad range of colors, rivaling chrysanthemums and carnations. But alas, the aster fell on hard times and production has dropped quite a bit. Too bad, this is a great flower.

The catch—and there is always a catch—is that this species can be a bit hard to grow. In the central states aster yellows disease, spread by leafhoppers, causes problems, and continues to do so judging by the trialers' comments. Growers everywhere must deal with the fact that it is a long-day plant, requiring 12- to 14-hour long days. In many areas it is best grown in greenhouses or high tunnels, but a number of folks were able to grow it well in the field. Annual asters reach perfection when grown in California, but other areas are able to grow them as well.

Those able to grow asters were rewarded with beautiful flowers. The Bonitas Series (Sakata/Gloeckner) scored the best with similarly rich colors as the Matsumotos, but with

tighter centers. 'Bonitas Pink' had the highest scores. 'Rose Shanghai Rose-White' from Gloeckner also did well with its beautiful two-tone flowers. With so many cultivars and colors in the trials there was a variety for just about everyone.

This was also a banner year for bicolor sunflowers—we had five. There was a nice assortment of excellent patterns and colors to choose from based on your market's preference, ranging from relatively little contrast between the colors to very strong patterns. At the lighter end of the spectrum, 'ProCut Amber Glow' (SeedSense) was definitely a project favorite with its angelic amber halo around its dark center. The picture doesn't do it justice; you have to see it for yourself. Growing 'Musicbox' (Benary) was like tapping shuffle on your iPod—you get a little bit of everything. Petal colors ranged from a pale yellow to a vibrant orange that contrasted well with the dark center. Furthermore, some flowers were a solid color while others were bicolor. The inconsistency may bother some people, but it's sure to excite others. 'Ring of Fire' (Benary) had a brown center, its petals stamped with a deep

red ring (of fire) turning to a rich yellow color. 'Procut Bicolor Plus' (SeedSense) was very similar to 'Ring of Fire', but had shorter petals and a larger disc and the color pattern was more defined. Finally, the pattern on the petals of 'Procut Lemon Bicolor' (SeedSense) was just like 'Bicolor Plus' (SeedSense), but a paler lemon color.

'Giant Sungold' (Benary), aptly named, had very tall (around 6 feet) and thick stems, and would probably benefit from pinching to produce multiple stems with smaller heads. It had that unique teddy bear face with many gold-orange colored petals and a green center.

Classic sunflower colors were also included in the trial. 'ProCut Brilliance' (SeedSense), with its ruffled orange-gold petals around a dark center, was an interesting new take on the typical sunflower. The flower of 'ProCut Gold' (SeedSense) looked similar to 'Brilliance' in the petals, but has a fun green center. 'Valentine' (Benary) had highlighter yellow petals around a dark center. As you read the comments about 'Valentine', you can understand the need for as many trialers as possible in

our evaluation programs. One contingent loved the small heads and many branches, making it a great cultivar for bouquets. Others listed the small heads and profuse branches as a problem—these growers probably need large flowers for farmers' markets.

Another heavy branching cultivar was 'Gold Rush', which would probably benefit from pinching, as without pinching the side shoots were often too short to be useful. 'Gold Rush' had orange petals and a dark center.

Cut ageratums are a staple for summer bouquets. Ageratum 'Everest' (Ball/Kieft), with its classic ageratum blue flowers, produced about 8 stems per plant, averaging 17 inches, with some folks getting 20- to 22-inch stems. Trialers ranked 'Everest' high with four out of five across the board. Please take note of our rhetorical restraint in that we did not refer to 'Everest' as a monumental cultivar.

Basils have become increasingly popular as fragrant fillers for bouquets and 'Aromato' (Genesis) adds an excellent choice to the list. Here at NCSU it was our most productive cultivar with 34 stems per plant, averaging 14.5 inches long. The overall

averages were 9 stems and 21 inches. As you can see, getting longer stems requires sacrificing a few stems. Chris Wien noted that he harvested five 23-inch stems per plant in the field, and nine 26-inch stems in his high tunnels. One negative: the color was an inconsistent blend of purple and green, and some trialers preferred the all-dark foliage. And of course, the tomato/tomahto issue: for some the fragrance was too little and others too much.

Celosias are quite a variable group of plants ranging from large crested types to those with small plumes, and the search continues for the perfect cultivar. 'Orange Peach' and 'Tornado Red' from Genesis were both small-crested types, and 'Sunday Dark Pink' and 'Sunday Wine Red' from Ball/Kieft were plume types. 'Orange Peach' scored the highest with its great color and multitude of branches. The side shoots tended to produce small plumes rather than crests and this plant would probably do well with a pinch. The Sundays were also productive, with all three cultivars averaging around 7 to 8 stems per plant. 'Sunday Wine Red' had the added benefit of reddish foliage.

Several trialers commented that all four cultivars were too short and many folks reporting stem lengths of less than 16 inches. However, the celosias performed well for at least a few folks. 'Orange Peach' and 'Sunday Dark Pink' had the longest stems, averaging around 19 inches with at least one trialer getting stems up to 36 inches. 'Tornado Red' was the shortest

by all accounts, with the tallest report of only 24 inches and the average of only 13 inches.

For a great fall crop, try pepper 'Orange Globe' (Genesis). Trialers commented on the large clusters of bright orange fruit. One person stated that "this is a premium cut pepper that commanded a great price - one of our favorites". Apparently others agreed as the overall scores were quite high. As with many ornamental peppers the stems were on the short side.

This year we are lucky to report on two other trials using the ASCFG material. See the results on pages 21 and 24.

In summary, we had 49 cultivars from 6 companies. Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year. The rankings are based on the combined ratings score: market appreciation + repeat again + ease of cultivation. Thus, from the 2011 trials five sunflowers are nominated for the Cut Flowers of the Year and will join other nominations from ASCFG members: four Procut cultivars, 'Bicolor Plus', 'Brilliance', 'Gold' and 'Red Lemon Bicolor', and 'Giant Sungold'. Looking beyond the sunflowers, the top-rated cultivar was pepper 'Orange Globe'.

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. 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 cultivar sounds interesting but did not appear to do well, try it anyway. The cultivar may work well for you.

Acknowledgments:

A hearty thank you to all of the 18 evaluators who returned their trial reports and to the seed companies for providing such great cultivars. Congratulations to Don Lareau, Zephyros Farm and Garden, for being the first trialer to return his evaluations. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials and Brigitte Crawford and Diane Mays 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.



SUMMARY OF COMMENTS

The number in a 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.

PARTICIPATING SEED COMPANIES

BALL HORTICULTURAL/KIEFT
West Chicago, Illinois
www.ballhort.com

BENARY SEED
DeKalb, Illinois
www.benary.com

FRED C. GLOECKNER COMPANY
Harrison, New York
www.fredgloeckner.com

GENESIS SEEDS LTD.
Ashalim, Israel
www.genesisseeds.com

KIEFT-PRO-SEEDS
Venhuizen, Netherlands
www.kieft-pro-seeds.com

SAKATA SEED AMERICA, INC
Morgan Hill, California
www.sakata.com

Photos in this article by John Dole,
with the exception of the following:

Brigitte Crawford
Celosia 'Orange Peach', page 17
Basil "Aramato", page 22

Polly Hutchison
Pepper 'Orange Globe', page 25

AGERATUM

Ageratum 'Everest Blue' (Ball/Kieft)

Good Qualities: Wonderful uniform color (5); Strong stems (3); Bright, strong grower; Good height, bloom size and number of flowers, blooms for an extended period; Strong, sturdy stems; Lots of flowers, with strong stems; Continuous picking from early summer, sturdy stems, larger florets on side stems than 'Florist Blue'; Long stems, nice size flower, germination was good, nice full flowers, good dark green leaves; Good for small bouquet.

Problems: Short; Centre flowers are quick to turn brown (if you cut the whole plant); Inconsistent stem length and flower head size.

Similar Cultivars: 'Blue Horizon' (5); 'Florists Blue'.

Postharvest Recommendations: Floralfife in cool water; Make sure stems are stripped clean.

Comments: Side by side, 'Everest Blue' and 'Blue Horizon' had identical heights, blooms with the only readily identifiable difference being a rose-colored center in unopened blooms of 'Everest Blue'; Hard to tell any difference between this and 'Blue Horizon'; Great introduction!; Smaller flower than the 'Blue Horizon' and not as prolific a bloomer; Useful in bouquets.

AMMI

Ammi majus 'Pink' (Genesis)

Good Qualities: Large, nice color, tall; Easy to grow, tall plant; Good quality pink when the flowers were just opening.

Problems: Crashes easily, floppy stems; Too similar to wild Queen Anne's lace, no real pink color when open, pink tint when tight, rabbits loved the transplants; Did not germinate well; Pink quickly fades to white as flowers mature; Uneven maturation - staggered harvest dates.

Postharvest Recommendations: Always remove secondary and tertiary buds.

Comments: White when ready to cut, not pink; This was direct seeded before drought and came up sparsely, the plants were weak and got overcrowded by weeds, so we did not see any blooms, a comparison variety, 'Snowflake', produced well in the same row; Plants got about 3 inches tall in the field, but never matured to provide any stems for cutting.

ASTERS

Asters 'Balloon Rose' (Gloeckner)

Good Qualities: None listed.

Problems: Died from fusarium or rhizoctonia; Too short to cut.

Asters 'Balloon Silver-Blue' (Gloeckner)

Good Qualities: Beautiful large double flowers, great color combination.

Problems: Too short to cut; Plants survived a little longer than the rose color, but still died of fusarium or rhizoctonia before flowering.

Asters 'Beautiful Day Rose' (Gloeckner)

Good Qualities: Long, strong stems (2); Might make a good potted aster; Nice color, good vase life; Nice size flower, good uniform color, germination was good, nice full flowers were well accepted on both colors; Very productive, showy plant: more suited as a bedding plant than a cut.

Problems: Too short (3); Very bushy, difficult in bouquets; Got aster yellows - within a few weeks of transplanting - does not like Texas; Susceptible to leaf wilt.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Very dry July contributed to short stems; Never got aster seeds to germinate for transplants, tried both seed trays and field planting with no success, believe due to the early arrival of the drought plus water restrictions; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Beautiful Day Yellow' (Gloeckner)

Good Qualities: Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers were well accepted on both colors; Productive, early.

Problems: Too short (3); Got aster yellows - within a few weeks of transplanting - does not like Texas.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Very dry July contributed to short stems; Never got aster seeds to germinate for transplants, tried both seed trays and field planting with no success, believe due to the early arrival of the drought plus water restrictions; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Bonita Blue' (Sakata/Gloeckner)

Good Qualities: Tall stems (2); Strong stems (2); Productive spray type; Can be cut as one huge stem or individually; 'Bonita Blue' is hardly a true blue, was still a nice later season color to contrast with all of the brighter colors of the moment, great contrast with the bold centers and mixed nicely with

our dahlias; Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

Problems: Unpinched, get a large cluster of small flowers that are hard to arrange; None; developed "rust" at end of season and then it spread from one variety to the other; Got aster yellows - within a few weeks of transplanting - does not like Texas.

Similar Cultivars: Similiar to Matsumoto series in size of flower and plant growth, without the open center of the Matsumotos.

Postharvest Recommendations: Floralife in cool water.

Comments: Try pinching early next time; Succumbed to aster yellows before reaching the marketable stage; Color more purple than blue; Aster seeds/transplants did not survive field conditions, tried both seed trays and field planting with no success, contributing factor drought conditions in May through October plus water restrictions throughout the growing season; Colors were good and full flowers, the "Blue" was well accepted and a rich color; Had no luck with the asters at all.

Asters 'Bonita Pink' (Sakata/Gloeckner)

Good Qualities: Long stems (2); Strong stems (2); Could be cut as one huge stem, or individually, nice hot pink color; Great color; Nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Erect spray type.

Problems: Of all of the Bonita cultivars, this was our least favorite color, not really a problem, just an aesthetic perception; Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Developed "rust" at end of season and then it spread from one variety to the other; Hard to use in arrangements unpinched.

Similar Cultivars: Similar to Matsumotos in flower size and plant growth.

Postharvest Recommendations: Floralife in cool water.

Comments: Pinch next time; Succumbed to aster yellows before reaching the marketable stage; Aster seeds/transplants did not survive field conditions, tried both seed trays and field planting with no success, contributing factor drought conditions in May through October plus water restrictions throughout the growing season; Colors were good and full flowers; Had no luck with the asters at all.

Asters 'Bonita Rose' (Sakata/Gloeckner)

Good Qualities: Tall (2); Strong stems (2); Spray type; small, uniform flowers, no sign of tip burn; Plant could be cut as one huge

PARTICIPATING GROWERS

CYNTHIA ALEXANDER
Bloomlust
Frisco, Texas

CLYDETTE ALSUP-EGGERS
Missouri State University
Springfield, Missouri

CHRISTOF BERNAU
UCSC Farm & Garden
Santa Cruz, California

LEON CARRIER
Plantmasters
Laytonsville, Maryland

JOSIE CROWSON
Josie's Fresh Flowers
Nacogdoches, Texas

CONNIE DAM-BYL
William Dam Seeds
Dundas, Ontario

DAVE DELBO
Dave's Flowers
Elysburg, Pennsylvania

KIM HAVEN
Billabong Fresh Flower Farm
Hempstead, Texas

CHAZZ HESSELEIN
Alabama Cooperative Extension System
Mobile, Alabama

POLLY HUTCHINSON
Robin Hollow Farm
Saunderstown, Rhode Island

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

DON LAREAU
Zephyros Farm and Garden
Paonia, Colorado

LINDA MCCALL
Nature's Harmony Farm
Long Grove, Oklahoma

DON MITCHELL
Flora Pacifica
Brookings, Oregon

DIANE SZUKOVATHY
Jello Mold Farm
Mount Vernon, Washington

ROGER TSCHANTZ
University of Guelph
Guelph, Ontario

CHERYL WAGNER
Wagner's Homestead Farms
Belleville, Michigan

CHRIS WIEN
Cornell University
Ithaca, New York

stem or individually; Rose was a good quality mid pink, good individual stem length and we were able to harvest as individual stems, often we grow asters as a single cut structural "filler" flower, but each color in the Bonita series produced good quality individual stems; Nice growth habit; The rose color was especially nice, sturdy stems, no aster yellows; Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

Problems: None; Small flower size; Developed "rust" at end of season and then it

spread from on variety to the other; Got aster yellows - within a few weeks of transplanting - does not like Texas

Similar Cultivars: Similiar to Matsumoto series in size of flower and plant growth, without the open center of the Matsumotos. **Postharvest Recommendations:** Floralife in cool water.

Comments: To get more long stems, want to try to pinch early; Last in the series to bloom; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success,

contributing factor drought conditions in May through October plus water restrictions throughout the growing season; Colors were good and full flowers; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Bonita Scarlet' (Sakata/Gloeckner)

Good Qualities: Tall (3); Strong stems (2); A nice pinkish red, which I guess is in fact scarlet, very bold, vibrant color that worked well with whites and purples that we had at the same time; Good filler; Nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Productive spray type

Problems: Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Developed "rust" at end of season and then it spread from one variety to the other; Large bunch hard to use in flower arrangements without pinching.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralife in cool water.

Comments: Pinch early next time; Colors were good and full flowers; Had no luck with the asters at all; Aster seeds/transplants did not survive field conditions, tried both seed trays and field planting with no success, contributing factor drought conditions in May through October plus water restrictions throughout the growing season.

Asters 'Bonita White'

(Sakata/Gloeckner)

Good Qualities: Strong stems (2); Tall spray type, small, attractive flowers, good filler?; Could be cut as one huge stem or individually; A good quality white that held its color in the vase much better than most white cultivars and has a good contrast with the bright centers; Nice habit, good filler; Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

Problems: Unpinched, get a large cluster of stems and flowers that are hard to use in arrangements; Sometimes short; Developed "rust" at end of season and then it spread from one variety to the other; Got aster yellows - within a few weeks of transplanting - does not like Texas.

Similar Cultivars: Similar to the Matsumotos in flower size and growth habit.

Postharvest Recommendations: Floralife in cool water.

Comments: To get more tall stems, will pinch early next time; Tallest of the series;

Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May thru October plus water restrictions throughout the growing season; Colors were good and full flowers; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Jewel Purpurit Lilac Rose'

(Gloeckner)

Good Qualities: Nice stems length, strong, good vase life; Long side stems are useful, can be produced without pinching.

Problems: Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralife in cool water.

Comments: Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Jewel Red Shadow' Mix

(Gloeckner)

Good Qualities: Nice color, solid vase life.

Problems: Not outstanding in productivity, earliness or stem length; Most plants died from disease; Got aster yellows - within a few weeks of transplanting - does not like Texas; Short stems.

Similar Cultivars: None listed.

Postharvest Recommendations: None listed.

Comments: Very few plants survived disease; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all.

Asters 'Jewel Rhodilit Carmine'

(Gloeckner)

Good Qualities: Tall, pretty filler, good vase life; Long side branches useful as cuts.

Problems: Plants died from disease (fusarium or rhizoctonia); Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Middle of the road in stem length, productivity and earliness

Similar Cultivars: None listed.

Postharvest Recommendations: None listed.

Comments: Had no luck with the asters at all; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success,

contributing factor drought conditions in May and June plus water restrictions throughout the growing season.

Asters 'Lady Coral Chamois'

(Gloeckner)

Good Qualities: Strong stems (2); Beautiful color, most survived disease pressure; Tall, long vase life; Nice size flower, good uniform color, germination was good, nice full flowers.

Problems: Too short to cut (3); A few died from disease; Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Unproductive.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralife in cool water.

Comments: Had no luck with the asters at all; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season.

Asters 'Lady Coral Lavender'

(Gloeckner)

Good Qualities: Attractive color (2); Long life; Strong stems, nice size flower, good uniform color, germination was good, nice full flowers.

Problems: Too short to cut (2); 12 days later than the earliest varieties in the trial, moderately productive and moderate stem length. Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralife in cool water.

Comments: Had no luck with the asters at all; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Lady Coral Rose' (Gloeckner)

Good Qualities: Strong stems (2); Best aster for surviving disease pressure; Nice color, long vase life, quick grower; Nice size flower, good uniform color, germination was good, nice full flowers; Productive mid-season.

Problems: Stems too short (3); Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Succumbed to aster yellows before reaching the marketable stage; Nice color, medium sized blooms; Never got aster seeds to germinate for transplants, tried both seed trays and field planting with no success; Believe due to the early arrival of the drought plus water restrictions; Had no luck with the asters at all.

Asters 'Rose of Shanghai Crimson'

(Gloeckner)

Good Qualities: Long stems (3); Strong stems (2); Attractive color; Nice color; Nice size flower, good uniform color, germination was good, nice full flowers.

Problems: Relatively late; Died of disease (fusarium or rhizoctonia); Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Rose of Shanghai Rose-White'

(Gloeckner)

Good Qualities: Long stems (2); Good color, long-lasting; Strong stems, nice size flower, good uniform color, germination was good, nice full flowers, loved the two-tone effect on the rose/white; Tallest stems in trial, attractive flowers with narrow petals, white with yellow centers, turning pink with age.

Problems: Died of disease (fusarium or rhizoctonia); Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Succumbed to aster yellows before reaching the marketable stage; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all; Worth growing again.

Asters 'Rose of Shanghai White'

(Gloeckner)

Good Qualities: Long stems (2); Strong stems (2); Most productive in trial, moderately early; Nice size flower, good uniform color, germination was good, nice full flowers.

Problems: Severe tip necrosis on several plants; Died from disease (fusarium or rhizoctonia); Too short to cut; Got aster yellows - within a few weeks of transplanting - does not like Texas; Color wasn't great.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

Asters 'Syringa' (Gloeckner)

Good Qualities: Large 2 1/2 in. flower; Tall, good growth habit.

Problems: Some plants died from disease; Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

Similar Cultivars: None listed.

Postharvest Recommendations: None listed.

Comments: Succumbed to aster yellows before reaching the marketable stage; Had no luck with the asters at all; Robust stems, large flowers, no sign of tip necrosis.



'ABC 2-3 Misty Blue'

FLORA PACIFICA SURVEY

In southwest Oregon, Don Mitchell conducted a consumer survey at Flora Pacifica. Fourteen customers rated flowers from each cultivar on a scale from 1 to 10. Of nine sunflowers in the trial, 'Giant Sungold' stole the show, receiving a score of 9.9 out of 10. Of nine other cultivars, delphinium 'Benary's Pacific Formula' Mix was the favorite with 9.0 out of 10.

Sunflowers 'Giant Sungold'	9.9
'Procut Bicolor Plus'	7.8
'Procut Red Lemon Bicolor'	7.6
'Valentine'	7.6
'Procut Amber Glow'	7.3
'Gold Rush'	6.9
'Musicbox'	6.7
'Ring of Fire'	6.5
'Soraya'	6.5
Others	
Ageratum 'Everest Blue'	7.5
Ammi 'Pink'	7.1
Snapdragon 'Potomac Lavender'	7.4
Campanula 'Campana White'	8.8
Craspedia 'Sun Ball'	7.3
Delphinium	
'Benary's Pacific Formula' Mix	9.0
Rudbeckia 'Prairie Sun'	7.3
Scabiosa 'Fama Deep Blue'	7.3
Scabiosa 'Fama White'	6.5



'Aramato'

BASIL

Basil 'Aramato' (Genesis)

Good Qualities: Long stems (4); Lots of stems (3); Aromatic fragrance (3); Strong stems (2); Good color (2), even when stems are older; Good grower (2); Attractive blooms; Uniform, early to bloom; Good branching, customers were surprised to smell the nice aroma in their bouquets, it was very well accepted; It held its color well, great filler plant; Very nice; Attractive dark red foliage; Good bloom color.

Problems: Minimal scent (2); Washed-out leaf color; Leaves too dark for some bouquets/arrangements; Perhaps we had too much rain, but the plants didn't last as long as other basil, they "browned up" earlier in the season than I would have liked; Really big leaves were quick to wilt if plants were not fully in flower, also, did not have particularly exciting color to attract customers; Some people disliked the fragrance, hard to sell to florists; Looks diseased.

Similar Cultivars: 'Opal' basil.

Postharvest Recommendations: Floralife and cool water; Definitely needs to be harvested once flowers are open or wilting is guaranteed; Hydration is a problem, but once hydrated, lasts long in the vase; We cut into hydrator.

Comments: Seemed to wilt easily; Would love to have also available similar plants with lighter color or greener leaves; Had a peculiar smell, not liked by some people; When the 'Aramato' basil was done, the 'Cardinal' basil took over, I didn't lack for the fragrance in my bouquets; I won't grow this again.

CAMPANULA

Campanula 'Campana White'

(Ball/Kieft)

Good Qualities: Nice big bells and good vase life with no extra treatment; Nice, pure white; Quick to bloom: 90 days from seeding; Pretty, nice addition to bouquets; Good stem length, form and vase life, very popular with customers.

Problems: Plants were inconsistent in stem length and number of stems produced; Difficulty getting seeds to germinate and thrive; Short stems, short vase life.

Similar Cultivars: None listed.

Postharvest Recommendations: None listed.

Comments: Seed did not germinate; Best grown from plugs, not seeds, and planted early spring, by the time transplants planted to field it was extremely hot, they succumbed to the heat and drought conditions plus water restrictions; Grow in hoop house or get it out early with protection; Floppy growth in the field without support.

CELOSIA

Celosia 'Orange Peach' (Genesis)

Good Qualities: Yummy color peachy salmon (5) especially for fall (2); Colorful, unique looking; High number of stems per plant; Lots of flowers; Branched without a pinch; Good flower shape, multi-branching with even side shoots which were great to use in smaller bouquets; Good stem length, strong stems, good branching, customers were surprised at the color in the bouquets - it was very well accepted.

Problems: Stems too short (2); Too long to mature in cold Pacific Northwest summer; Some branches bore plume rather than crested blooms; Does not form nice uniformed heads, mites; Small plume heads and a very muted pinky orange color, not very appealing.

Similar Cultivars: 'Temple Bells Orange'; 'Kurume'.

Postharvest Recommendations: Floralife in cool water.

Comments: This was our favorite celosia this year; Fabulous color! might try this one next year in the hoop; I loved the unique color and the plants performed wonderfully; Florists do not purchase celosia unless they have a specific need as they say they cannot put it in the cooler.

Celosia 'Sunday Dark Pink'

(Ball/Kieft)

Good Qualities: Beautiful dark foliage matches plume color, good-sized full plumes; Nice clean color and nice stems; Great for shorter bouquets; Good form; Slightly larger than the wine red color; Lots of flowers, lasts a long time in postharvest; Branching plumes; Good full plumes, multi-branching plants; None.

Problems: Short (2); Slow to mature in cold Pacific Northwest summer - better than a lot of other varieties, though; Blooms do not hold up long in field, blooms did not enhance bouquets; Plants varied in color; More terra cotta than dark pink.

Similar Cultivars: None listed.

Postharvest Recommendations: None listed.

Comments: Might try this one in the hoop next year; Color is very close to red; Florists do not use much celosia because they say they cannot put in cooler, therefore, they only buy sporadically, loved the color.

Celosia 'Sunday Wine Red' (Ball/Kieft)

Good Qualities: Bright, colorful nice shape; Beautiful dark foliage matches plume color, good sized full plumes; None; Nice color, attractive form; Lots of flowers; Pretty green with red-edged foliage, autumn colors of muted red with orange-tipped flower on bronzy leaves.

Problems: Too short (3); No great beauty; Too slow to mature in cold Pacific Northwest summer; Some flowers were plumed, some crested wine red was somewhat dull.

Similar Cultivars: None listed.

Postharvest Recommendations: None listed.

Comments: 'Sunday Wine Red' is more branching than 'Sunday Pink'; Of all the cultivars we trialed, this one was the slowest to develop, so much so that we can't even

see color yet in Pacific Northwest; We had a dry July that most likely kept plants smaller than the should be; Florists liked the color but purchased only when they had a specific need, said they could not keep in the cooler.

Celosia 'Tornado Red' (Genesis)

Good Qualities: Magnificent red color (6); Strong stems (2); Loose fan shape—exotic looking, multi-branching habit was good for more stems to harvest!; None; Attractive form, multi-stemmed flower heads set huge; Large burgundy combs from non-pinched plants; Good stem length, good branching, customers were surprised at the color in the bouquets, it was very well accepted, many stems had good-sized heads, flowers were good size and pretty uniform; Good filler.

Problems: Stems are too short (4); Too long to mature in a cold Pacific Northwest summer; Nothing particularly nice about the color or shape, all the trial celosias this year were disappointing; Leaves wilt easily; Mites; Better used as a bedding plant; Thick stem.

Similar Cultivars: 'Toreador'

Postharvest Recommendations: Floralfife in cool water.

Comments: Great bedding plant; I loved the color and the plants performed wonderfully; Florists do not purchase celosia unless they have a specific need as they say they cannot put it in the cooler.

CRASPEDIA

Craspedia 'Sun Ball' (Genesis)

Good Qualities: Bright yellow color (2); Tall stems; Stiff, viable stems, holds color well, everlasting, drying erect while upright; Small flowers on top of strong stems; Very similar to unnamed species; Unusually bright balls on long stems that dry and still look fresh; Vase life; productive, good accent flower in arrangements; Good filler flower.

Problems: Disappears in bouquets, takes a long time to grow; NOT a good candidate for cool summers; Plants died in hot, wet weather; Flowers were too small; None; Wiry stems; Growth in field was variable, transplants hard to establish in high tunnel after 58 days in seedling tray: should have been transplanted younger?; Few stems per plant; This was another variety that didn't do well, mostly due to weather, perhaps I got it out too early.

Similar Cultivars: Standard Drumstick very similar - I grew them side by side and had to check the tag; I compared this variety to 'Billy Buttons' (Harris), and 'Goldstick'

(Johnny's), and could not tell the difference among them.

Postharvest Recommendations: Craspedia is indestructible and lasts forever in the vase, whether given water or kept dry, there is no change in appearance upon drying.

Comments: Grew this one alongside the cultivar 'Billy Buttons' and that one performed much better, although still not what I'd call a crop in an unusually cool Pacific Northwest summer; Never have been a fan of craspedia; This is a tough survivor; Plants green and vigorous in early winter in the high tunnel, so will see if it overwinters. Authors' note: Chris Wien at Cornell obtained 10 stems per plant in the field and 18 in the high tunnel. Stems were 22 inches long in the field and 28 in the tunnel.

DELPHINIUM

Delphinium 'Benary's Pacific Formula' Mix (Benary)

Good Qualities: Long stems, strong stems, nice size flower, good uniform color, germination was good; Nice stem length and color mix; Easy to grow, colorful, good stem length.

Problems: Needs long growing time in south Texas; None; Difficulty getting seed germination; Tendency to crash.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: Seed did not germinate; Crop failure; Excellent growth and healthy plants, but did not bloom due to short crop time prior to onset of Texas summer, if started in the late summer for fall planting, it would bloom in the spring; Delphinium is difficult to germinate and takes a long time to get to transplant size, with the extreme drought conditions and early heat they quickly succumbed to the heat; delphinium grows better from plugs in my zone (7b).

LARKSPUR

Larkspur 'Galilee Blue' (Genesis)

Good Qualities: Attractive blue color (4); Tall, nice addition to bouquets; Tall; Very nice stem quality, even length and diameter/strength, worked very well in our early season color range for mixed bouquets; Nice flowers, good and full; Productive.

Problems: None (2); Needs support in greenhouse; Some crown rot, probably due to a very wet spring; Stems short, florets widely spaced on stem.

Similar Cultivars: 'Qis Blue'.

Postharvest Recommendations: None listed.



'Sunday Dark Pink'

Comments: Bloomed same time in greenhouse as did fall-sown field larkspur; Planted both in field and seed trays, new transplants succumbed to the heat; Fine, but not outstanding.

Larkspur 'Galilee White' (Genesis)

Good Qualities: Tall (2); Nice flowers, good and full; Strong stems, unique looking; Pure white; Stems were nice and full of flowers; Good stem strength and length, flowers were large and showy when fresh.

Problems: None (2); Needs support in greenhouse; Plants were stressed with our weather this year, I thought it best to cut the whole stem and use before the main flowers were spent; Some crown rot, probably due to a very wet spring, dried flowers were not the nicest colors, faded to brownish.

Similar Cultivars: 'Qis White'.

Postharvest Recommendations: Floralfife in cool water.

Comments: Fine, but not outstanding; Bloomed in the greenhouse at the same time as fall-sown field larkspur; Planted both in field and seed trays, new transplants succumbed to the heat, will try again to grow provided the seeds were planted in the fall for a spring harvest.

MISSOURI STATE FLOWER VARIETY TRIAL

Clydette Alsup, Missouri State University, did a great side project with the ASCFG trial flowers (and a few others that we left off). Celosia 'Orange Peach' was the longest-lasting cultivar with a vase life of 17 days. You can see all of her results at <http://tinyurl.com/7m4au5a>

Cultivar	Vaselife		
	Average	Maximum	Minimum
Ageratum 'Everest Blue'	7.1	12	3
Annual aster 'Balloon Rose'	5.5	15	4
Annual aster 'Balloon Silver-Blue'	6.2	13	2
Annual aster 'Beautiful Day Rose'	10.6	14	4
Annual aster 'Beautiful Day Yellow'	6.8	13	4
Annual aster 'Bonita Blue'	5.7	7	4
Annual aster 'Bonita Pink'	4.0	4	4
Annual aster 'Bonita Rose'	5.8	14	4
Annual aster 'Bonita Scarlet'	5.3	7	4
Annual aster 'Bonita White'	4.0	4	4
Annual aster 'Jewel Purpurit, Lilac Rose'	4.3	5	4
Annual aster 'Jewel Red Shadow Mix'	4.6	5	4
Annual aster 'Jewel Rhodilit, Carmine'	3.6	5	1
Annual aster 'Lady Coral Chamois'	4.7	7	2
Annual aster 'Lady Coral Lavender'	3.7	5	1
Annual aster 'Lady Coral Rose'	4.9	6	4
Annual aster 'Rose of Shanghai Crimson'	5.6	12	4
Annual aster 'Rose of Shanghai Rose-White'	4.2	6	2
Annual aster 'Rose of Shanghai White'	4.3	6	2
Annual aster 'Syringa'	5.3	7	4
Basil 'Aramato'	11.5	19	4
Campanula 'Campana White'	5.7	7	4
Celosia 'Orange Peach'	17.0	28	7
Celosia 'Sunday Dark Pink'	11.6	18	0
Celosia 'Sunday Orange'	14.5	18	11
Celosia 'Sunday Wine Red'	14.3	21	7
Delphinium 'Benary's Pacific Formula'	4.5	5	4
Lisianthus 'ABC 2-3 Misty Blue'	7.0	12	4
Rudbeckia 'Prairie Sun'	8.4	12	6
Sunflower 'Giant Sungold'	11.0	11	11
Sunflower 'Gold Rush'	5.0	6	4
Sunflower 'Musicbox'	1.0	1	1

LISIANTHUS

Lisianthus 'ABC 2-3 Misty Blue' (Ball/Kieft)

Good Qualities: Attractive color (5); Multiple blooms; Popular with customers, blooms enhanced most bouquets, large blooms; Adequate stem length; Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

Problems: Tendency to fall over in the wind; Thrips; Shorter than most lisianthus grown this year; Did not germinate well; Slow to germinate and long period of growth to viable transplants; Half as productive and 10 days later than 'ABC 1-3 Misty Blue' in these trials, but 25% taller.

Similar Cultivars: 'ABC 1-3 Misty Blue'; Other ABC lisianthus.

Postharvest Recommendations: Flor-life in cool water.

Comments: It was too cold for us this summer to grow lisianthus even in the hoop!, this one is slower than the others we trialed, though; By the time the seeds got to transplant size and planted to the field, they did not survive the May-October heat/drought, water restrictions were also an issue, will grow again, but not field grown and only from plugs; We had very poor germination and never planted this crop out; This variety deserves another look.

Lisianthus 'ABC 2-4 Yellow

Improved' (Ball/Kieft)

Good Qualities: Nice color! (2); Good stem length (2); Strong stems (2); More yellow than some varieties; Nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Best of the lot for stem length and production in a lousy cold summer; Strong central stem; As productive and as early as our standard 'Echo Champagne'

Problems: Some single petal bloom plants; None; Short stems for the most part; Color more creamy than yellow, centre petals were too varying; Slow to germinate.

Similar Cultivars: Other ABC lisianthus.

Postharvest Recommendations: Flor-life in cool water.

Comments: Flowers that opened in the field had browning on petal edges and in centres, buds that opened indoors were clean; By the time the seeds got to transplant stage and planted in the field,

they did not survive the extreme heat/drought conditions from May to October, will try again but from plugs, not seeds; We had very poor germination.

PEPPER

Pepper 'Orange Globe' (Genesis)

Good Qualities: Excellent color (5); Beautiful orange, yellow, and green 1-inch mini-peppers; Good choice for fall arrangements and bouquets (2); Healthy plants, well received by customers, excellent in pepper wreath; Large pepper clusters, strong branches; Good shape and cluster size; Stems were nice and full of fruit, fruit was bright and good sized, customers were interested in the addition to the bouquet; Great in arrangements to add a little interest; Nice, long lasting.

Problems: Took a long time to color (2); Short stems; Waited until mid-October from a March 25 seeding to see color; Plants were full of fruit, but the stems weren't very long, if I cut the whole stem it was good and full in a bouquet and I did this for some bouquets at the end of the season; Takes a while to get the stem length needed for bouquets, selling by the stem, etc.

Similar Cultivars: None listed.

Postharvest Recommendations: Harvest into hot water; Floralfife and cool water.

Comments: Planted direct to the field, growing conditions were extreme drought in May through October plus water restrictions throughout the growing season, good producer; This is a premium cut pepper that commanded a great price, one of our favorites.



'Orange Globe'

RUDBECKIA

Rudbeckia 'Prairie Sun' (Benary)

Good Qualities: Beautiful fresh color with greenish center (5); Strong stems (3); Uniform color (2); Easy to grow; Good straight stems; Long stems, nice size flower, germination was good; Quick to bloom.

Problems: Hairy rough stems unpleasant to strip leaves from, succumbed to powdery mildew late in season; Crashes easily in the heat, sometimes short; Petal tips tend to dry out a little—we found it best to harvest on early side; There were lots of flowers that

were too short to cut; The gophers loved it; None; It is shorter than other hirtas, and color is okay, but not as pretty as 'Irish Eyes' or 'Irish Spring'; Issues with stem length possibly due to water restriction limitations due to excessive drought conditions; Sometimes the petals are too long.

Similar Cultivars: None listed.

Postharvest Recommendations: Floralfife in cool water.

Comments: More of a garden plant than cut flower, people always say that it is one of the nicest rudbeckias ever; I think it is a beautiful rudbeckia and worth growing, especially for market customers, a little difficult to sell to florists; This one is a real workhorse! Love the color with the green centers—stands out in bouquets; Nice addition to summer lineup.



'Prairie Sun'

SCABIOSA

Scabiosa 'Fama Deep Blue' (Benary)

Good Qualities: Strong stems (3); Big flowers, pretty!; Flowers first year from seed, keeps producing late into the season, good coloration; Great color, good stem length; Long stems, nice size flower, good uniform color, germination was good.

Problems: Poor yield (2); Pain in the butt to establish, doesn't compete well, spindly, probably better in year two; Did not bloom and burnt up in the Texas summer; None; Any transplants set out promptly wilted from the excessive heat/drought and water restrictions were an ongoing issue; Some plants are a lighter shade of blue.



'Musicbox'

Wholesalers love this variety: easy to harvest and sell; Might be better the second year.

SNAPDRAGON

Snapdragon 'Potomac Lavender' (Ball/Kieft)

Good Qualities: Strong stems (4); Straight stems (3); Rich color (2); Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Cloudy-like appearance; Good greenhouse forcing variety; Withstands heat well, strong spike, blossomed as well as any snapdragon ever grown; Good floret fill on stems, soft mixable color for bouquets.

Problems: Short, especially branching stems; None; A bit lighter in color to their lavender snapdragons grown; Did not germinate well; Like most cultivars, Showed late season susceptibility to rust; It was wet around here so I think they were stunted from root rot.

Similar Cultivars: Other Potomac snapdragons; Other greenhouse forcing varieties.

Postharvest Recommendations: Floralife in cool water.

Comments: At first I thought the color looked "washed out" and pale, but as the season went on they grew on me—it was a wonderful performer, even with our diverse weather season; Grown in greenhouse; In the heat the color fades to an unattractive washed-out shade of lilac.

SUNFLOWER

Sunflower 'Giant Sungold' (Benary)

Good Qualities: Gorgeous double flower (4); Nice size (2); Florists loved it (2); Furry with green center; Unique flower shape, pleasing in arrangements; Long stems, strong stems, good uniform color, germination was good, double flowers were well accepted; Big, bright, long vase life.

Problems: Thick stem (2); Buds all the way up the stem, many near bloom, weakening stem near top, many off-center blooms, would not grow again; Susceptible to disease, many buds on stem, some flowers opened only halfway; First spring planting was like a grasshopper magnet—they ate everything, stripped the leaves and started on the young flower buds, the few flowers that did start to open were very dirty looking in the center,

second planting did not have these issues; Long crop time; 75% germination, grows huge at 6" spacing, loong time to flower with long-day conditions, experienced stem rot and other fungal issues, susceptible to blow-down in summer wind/rain events, difficult to strip foliage.

Similar Cultivars: 'Sun King', 'Double Quick' (2); 'Teddy Bear'.

Postharvest Recommendations: Floralife in cool water; Did fine in plain water.

Comments: Very, very tall, may be more manageable pinched; This was the last sunflower to bloom in the whole patch.

Sunflower 'Gold Rush' (SeedSense)

Good Qualities: Long stems (3); Similar to 'Procut Orange', but generally smaller bloom, somewhat darker color, larger center and shorter petals; Useful as bouquet-size branching with small brown center; Standard sunflower, hardy, easy to grow; 100% germination! nice, rich petal shape and color, classic sunflower; Early blooming, good golden color, green buds add contrast in bouquets, small size is good for floral work; Strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Branching; Petals orange with dark disc, profuse branching at wide spacing; Attractive, crisp-petaled bloom for the first 3 to 4 days.

Problems: Seemed that after it was cut the petals got weak; Some blooms too small to be usable; Many petals were cupped small, short; None; Multiple heads and side branching, grew too big at 6-inch spacing, grows tall in long-day conditions making it more likely to topple in summer wind/rain events; Very multi-branching; Moderately daylength sensitive - flowered 8 days earlier after short day exposure in seedling stage than when grown in long days, profuse branching keeps main flower size low; Side shoots usually too short.

Similar Cultivars: 'Procut Orange'; Lots – this one doesn't stand out for me.

Postharvest Recommendations: May help to cut this one before it totally opens; Harvested as fully-colored petals were just emerging, did fine in plain water; Floralife in cool water.

Comments: Many side buds, which are not liked for production harvest, but okay for home garden extended use; Did not pinch to encourage branching; At the 9 x 9 in. spacing used, showed a lot of branches that were wasted to get enough stem length for the main stem, in a topping trial, was very productive at higher densities.

Similar Cultivars: 'Fama Blue'.

Postharvest Recommendations: We use low-sugar holding solution; Floralife in cool water.

Comments: I don't see much difference between this one and 'Fama Blue', but that's not necessarily a problem; I have gotten great ones from California growers.

Scabiosa 'Fama White' (Benary)

Good Qualities: Strong stems (2); Big flowers, pretty!; Straight stems, uniform height; Taller stems, nice addition to bouquets; Flowered sparsely first year from seed, nice full bloom, good clean white color; Great form; Long stems, nice size flower, good uniform color, germination was good.

Problems: None (2); Some of the flowers had browning at the edges; Tends to get tired at end of season, susceptible to thrips damage; Not very many stems per plant; Did not bloom and burnt up in the Texas summer; Pain in the butt to establish, doesn't compete well, spindly, probably better in year two.

Similar Cultivars: None listed.

Postharvest Recommendations: We use low-sugar holding solution; Floralife in cool water.

Comments: Any transplants set out promptly wilted from the excessive heat/drought and water restrictions were an ongoing issue;

Sunflower 'Musicbox' (Benary)

Good Qualities: Many 4-inch blooms, medium yellow color petals with rusty brown center; Nice mix of colors, small flower size is good for bouquets. Branching plants look pretty in garden; Long stems, strong stems, nice size flower, good uniform color, germination was good; Useful as a filler in bouquets; Tall, strong, held well, good vase life.

Problems: Too short (3); Pollen (2); Multiple heads; Off-types present; Didn't like that I cut the whole stem at once, some flowers weren't open all the way, but would have lost center flower if I waited; None; Not a cut flower type; would be more suitable as a temporary bedding plant, but not long-lived enough for that purpose.

Similar Cultivars: 'Valentine'.

Postharvest Recommendations: Floralife in cool water; Cut when petals first opening into plain water.

Comments: 80% germination; Too short for anything other than bouquet work, too short for florist and flower was only about 3 inches across; Am not really a fan of this color mix.

Sunflower 'ProCut Amber Glow'

(SeedSense)

Good Qualities: Beautiful unique color—apricot with orange tones (4); Strong (4); Tall (2); I loved both 'Amber Glow' and 'Brilliance', great colors, well received by customers; Very pretty color combo; 95% germination, single flower per stem, regular head size, didn't grow too big; Plant habit okay, very early to bloom; 4 -6 inch blooms; Little branch tendency, attractive slightly darker center on pale yellow petal tips, 58 days from sowing in midsummer; Nice size flower, germination was good, nice full flowers, good dark green leaves; Fast grower.

Problems: None (3); Blooms generally too small, thin stems; Petals look faded, unstable stem, insect magnet; Color is too pale, there is not enough definition in the bi-color pattern.

Similar Cultivars: 'Peach Passion'.

Postharvest Recommendations: Flower form stayed a little cupped when harvested at standard "petals emerging" stage for sunflower—might harvest a little more open or experiment with low sugar flower food—however, cupped shape is a nice look; Floralife in cool water.

Comments: Might try growing again with wider spacing in hopes of getting larger blooms; This one was my absolute favorite of all of the varieties we trialed this year, the peachy petal color is very trendy right now and these were the first ones our customers

grabbed out of the mixed varieties bucket at market, a perfect September sunflower; Didn't like color.

Sunflower 'ProCut Bicolor Plus'

(SeedSense)

Good Qualities: Sharp contrasting petal colors (5); Consistent bicolor pattern from plant to plant (2); Long stems, strong stems, nice size flower, germination was good, nice full flowers, good dark green leaves; A favorite with customers, strong stems; Very attractive, stands out in bouquets, has "WOW" factor; Would work well in autumn bouquets; Beautiful dark center and 6 inch wide flowers; Strong, straight stems, vigorous grower, insensitive to daylength.

Problems: None; Some stem instability post harvest; Petal drop after 5-7 days in the cooler.

Similar Cultivars: 'Orange Mahogany'.

Postharvest Recommendations: Floralife in cool water; This new version is somewhat less susceptible to petal loss when the heads are brushed than the original version of 'Procut Bicolor', but not as good as standard orange varieties.

Sunflower 'ProCut Brilliance'

(SeedSense)

Good Qualities: Bright attractive color (8); Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; I loved both 'Amber' and 'Brilliance', well received by customers; Similar to 'Procut Orange' and just as good; Great leaves, 5 inches across, brilliant yellow near tips and gold near center; Large, nice vase life; Very uniform, single head per plant; Firm stem, like deepening petal color towards center; Consistent, good petal fill around centres; 4-6 in. flower; Medium height and vigor.

Problems: None (2); A little hard to strip foliage; Centres too large.

Similar Cultivars: 'Procut Orange'; It is fairly similar to many other cultivars.

Postharvest Recommendations: Floralife in cool water; Did fine in plain water.

Comments: The variation in petal color from orange at center to lighter yellow-orange at tips is subtle but eye catching, I just might grow this one next year; Insensitive to daylength.



Comments: All varieties came in about the same time. I should have spaced the planting times; Shorter variety than others in series; 64 days from sowing in midsummer; slightly later than most orange varieties.

Sunflower 'ProCut Gold' (SeedSense)

Good Qualities: Beautiful gold with green yellow center (4); Strong stems (2); Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Nice size; Sold every stem; Nice, early sunflower, pretty centers, long vase life; 100% germination,

fantastically uniform, stem and head size not too large so useful for bouquet work; Green center holds well in heat; Taller plant habit than other ProCuts in the trial patch, gave better stem length, 10 days earlier than 'Sunrich Gold'; 4-6 inch flowers, sturdy stems; Strongest of the series tested; Attractive medium-sized flower.

Problems: None (2); Hard to strip foliage, disc fades to pale gold as flower head opens, petals a little pointy for my taste; Unstable stems, petals fold backwards lengthwise; Some stems thick and necks curved, some flowers with bent petals.

Similar Cultivars: 'Sunrich Gold' (2).

Postharvest Recommendations: Floralife in cool water; Did fine in plain water.

Comments: Very popular with my farmers' market customers; I might be excited about this one except that 'Sunrich Gold' is every bit as uniform and easy to grow with foliage that strips much easier, also the disc on 'Sunrich Gold' stays vibrant green as the flower opens while this one fades to a dull gold; Production of green-centred sunflowers has been increasing here over the last few years; This was my favorite; Insensitive to daylength.

Sunflower 'ProCut Lemon Bicolor'

(SeedSense)

Good Qualities: Attractive bicolor (3); Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Great for late season bouquets, long lasting, unique looking; Very attractive petal

coloration, good petal overlap; Early variety, strong stems, 4-5 inch flowers; Opens nicely when cut; 95% germination, single head per stem, fairly uniform stem and head size, uniform coloration; strong, vigorous plant.

Problems: Petal drop (2); None; Some stem instability post harvest; Grows too large at 6-in. spacing for bouquet work, also tends to topple in summer wind/rain events because it grows so big, I might try this one at 4-inch spacing; Somewhat late: 68 days in midsummer.

Similar Cultivars: 'Ruby Eclipse', 'Strawberry Blonde', I think this one is better than those.

Postharvest Recommendations: Floralife in cool water; Did fine in plain water.

Comments: All varieties came in about the same time, I should have spaced the planting times; Valuable addition to our summer mix; Uniform growth habit and coloration for a novelty type, the burgundy center is lovely; Insensitive to daylength.

Sunflower 'Ring of Fire' (Benary)

Good Qualities: Nice bicolor pattern (4), consistent; Good rich rusty red color for autumn; Strong contrast of color in flower head; Long stems, strong stems, nice size flower, good uniform color, germination was good; Pretty; 90% germination, good.

Problems: Multi-branching, has pollen; None; Petals began to drop within few days of cutting; Short stems, short vase life; Multiple heads per stem, difficult to strip leaves, pointy shaped petals.

Similar Cultivars: 'ProCut BiColor Plus';

Something like 'Procut Bicolor', which is far easier to grow and harvest.

Postharvest Recommendations: Cut when petals first opening into plain water; Floralife in cool water; Did fine in plain water.

Comments: This is a great garden plant, but not a professional cutting type; Branching variety which, once cut, made 2-3 additional 12 inch long stems with about 3 inch flowers. Only good for short bouquet work; Grew plants close to get a single stem crop.

Sunflower 'Soraya' (Benary)

Good Qualities: Beautiful deep orange color; (2); Long stems (2); Heads point up which shows well in a bouquet, various blooms sizes can be used in large or small arrangements, Almost leafless stems; Strong stems, nice size flower, good uniform color, germination was good; Upward facing.

Problems: None (2); Pollen (2); Bloomed later than other varieties in patch; Stem length was very short and side branches never opened; 50% germination, long time to mature under long day conditions so not yet blooming for us in Pacific Northwest.

Similar Cultivars: None listed.

Postharvest Recommendations: Cut when petals first opening into plain water; Floralife in cool water.

Comments: Long lateral branching is unusual for a sunflower, quite useful; Grew plants close to get a single stem crop.

Sunflower 'Valentine' (Benary)

Good Qualities: Rich light yellow color with dark center (8); Branching (2); Strong stems (2); Medium sized bloom is easy to use; Developed long laterals that could also be used, long stems, nice size flower, good uniform color, germination was good; Useful as a filler in bouquets; Good side shoots; Small head size good for bouquet work; More useful as a home garden cut flower variety.

Problems: Too short (2); Has pollen (3); Flowers too small (2); Washed-out pale yellow (2), making them unsellable; Many unusable; Very brittle, stem caliper at the flower head is very thin and flimsy; grasshoppers like it; Short vase life; 80% germination is too sketchy for us, multiple heads, difficult to strip foliage; Muddy color.

Similar Cultivars: 'Procut Lemon', 'Musicbox'.

Postharvest Recommendations: None listed.

Comments: People are always looking for different colored sunflowers, and this is one; Not suitable for commercial production.



Ring of Fire'

2011 ASCFG Seed Trial Results. The 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, either only one person responded for that category or several responded and all gave the same rating. The single highest score and the single lowest score in each category for each cultivar have been dropped.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ¹	Repeat again rating ¹	Ease of cultivation rating ¹	Average postharvest life (days)
Ageratum 'Everest Blue' Ball/Kieft	7.9 1-18	16.7 6-24	4.0 3-5	4.0 1-5	4.0 3-5	9.6 4-15
Ammi 'Pink' Genesis Seed	5.0 1-13	28.1 15-46	2.6 1-4	2.6 1-4	3.1 1-5	12.0 10-14
Aster 'Balloon Rose' Gloeckner	1.9 1.9	32.4 32.4	2.6 1-4	1.0 1	1.7 1-3	- -
Aster 'Balloon Silver' Gloeckner	3.3 1.6-5	17.4 12-23	3.0 1-4	2.0 1-4	2.3 1-4	10.0 10
Aster 'Beautiful Day Rose' Gloeckner	6.1 1-16	14.0 10-24	2.7 1-5	2.6 1-5	2.9 1-5	11.3 7-14
Aster 'Beautiful Day Yellow' Gloeckner	7.8 1-13	15.4 10-24	3.2 3-5	2.6 1-5	3.0 1-5	8.5 7-10
Aster 'Bonita Blue' Sakata/Gloeckner	6.0 1-15	19.3 12-28	3.7 2-5	3.9 1-5	3.5 1-5	10.0 7-14
Aster 'Bonita Pink' Sakata/Gloeckner	5.1 1-8	19.1 12-28	3.7 2-5	3.6 1-5	3.5 1-5	6.3 7-14
Aster 'Bonita Rose' Sakata/Gloeckner	6.5 1-12	19.1 12-28	4.1 3-5	4.0 1-5	3-9 1-5	9.6 7-14
Aster 'Bonita Scarlet' Sakata/Gloeckner	5.5 1-12	17.1 12-27	3.9 2-5	3.9 1-5	3.5 1-5	10.0 7-14
Aster 'Bonita White' Sakata/Gloeckner	5.6 1-10	19.0 12-30	3.9 2-5	3.7 1-5	3.6 1-5	9.3 7-14
Aster 'Jewel Purpurit Lilac' Gloeckner	4.1 1-11	18.4 12-26	3.2 3-4	3.7 3-5	2.8 1-4	9.0 7-14
Aster 'Jewel Red Shadow Mix' Gloeckner	4.2 1-11	16.4 12-24	2.9 2.7-3	2.6 1-4	2.7 1-4	7.0 7
Aster 'Jewel Rhodilit Carmine' Gloeckner	4.3 1-12	17.7 12-24	2.9 3	3.0 1-5	2.5 1-4	9.0 7-10

¹ 1 to 5 scale, with 5 being the best. Market ratings are based on sales to wholesales, retailers, or final consumers direct.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ¹	Repeat again rating ¹	Ease of cultivation rating ¹	Average postharvest life (days)
Aster 'Lady Coral Chamois' Gloeckner	3.7 1-6	16.0 10-25	2.9 1-4	2.7 1-5	2.7 1-4	9.3 7-14
Aster 'Lady Coral Lavender' Gloeckner	4.1 1-8	16.9 10-26	2.7 1-4	2.4 1-5	2.7 1-4	8.3 7-10
Aster 'Lady Coral Rose' Gloeckner	4.6 1-12	17.0 10-30	3.2 2-4	2.5 1-4	3.1 1-4	8.0 7-10
Aster 'Rose of Shanghai Crimson' Gloeckner	4.4 1-10	20.5 12-28	3.4 3-5	3.2 1-5	2.7 1-5	10.0 7-14
Aster 'Rose of Shanghai Rose-White' Gloeckner	5.1 1-12	20.1 12-28	3.7 3-5	3.4 1-5	2.9 1-5	10.0 7-14
Aster 'Rose of Shanghai White' Gloeckner	7.3 1-17	15.6 12-28	2.9 1-5	3.0 1-5	2.4 1-5	10.0 7-14
Aster 'Syringa' Gloeckner	3.9 1-10	16.6 13-24	3.1 3-4	3.3 3-4	3.0 3-3	9.0 7-14
Basil 'Aromato' Genesis Seed	8.9 1-34	20.9 12-46	3.6 2-5	3-6 1-5	4.4 2-5	11.0 5-18
Campanula 'Campana White' Ball/Kieft	3.6 1-8	17.7 7-24	3.7 2-5	3.0 1-5	3.5 1-5	9.3 3-14
Celosia 'Orange Peach' Genesis Seed	7.3 1-27	19.2 6-35	3.6 1-5	3.7 1-5	4.4 3-5	10.8 7-14
Celosia 'Sunday Dark Pink' Ball/Kieft	7.6 1-22	19.5 12-48	3.3 1-5	3.3 1-5	4.2 3-5	14.6 7-30
Celosia 'Sunday Wine Red' Ball/Kieft	6.8 3-21	15.2 6-56	2.7 1-5	2.6 1-5	3.8 3-5	7.8 7-14
Celosia 'Tornado Red' Genesis Seeds	4.4 1-12	13.5 6-24	3.8 2-5	2.9 1-5	4.4 3-5	10.0 7-14
Craspedia 'Sun Ball' Genesis Seeds	4.9 1-18	22.9 15-34	3.6 1-5	3.2 1-5	3.3 1-5	18.0 3-39
Delphinium 'Benary's Pacific Mix' Benary	2.7 1-5	22.7 12-30	3.3 1-4	3.4 2-4	3.4 1-5	6.5 6-7

¹ 1 to 5 scale, with 5 being the best. Market ratings are based on sales to wholesales, retailers, or final consumers direct.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ¹	Repeat again rating ¹	Ease of cultivation rating ¹	Average postharvest life (days)
Larkspur 'Galilee Blue' Genesis Seed	3.4 1-7	28.7 12-48	3.7 2-5	3.1 1-4	3.7 1-5	6.8 4-9
Larkspur 'Galilee White' Genesis Seed	2.7 1-8	29.1 12-48	4.0 3-5	3.4 1-4	3.9 1-5	6.2 5-9
Lisianthus 'ABC 2-3 Misty Blue' Ball/Kieft	2.8 1-7	18.2 6-34	4.1 2-5	4.1 3-5	3.4 1-5	12.3 7-14
Lisianthus 'ABC 2-4 Yellow Improved' Ball/Kieft	2.7 1-7	17.5 10-29	3.9 3-5	4.0 3-5	3.4 1-5	12.0 4-14
Pepper 'Orange Globe' Genesis Seed	3.8 1-7	15.7 6-31	4.1 3-5	3.9 2-5	4.4 4-5	16.8 7-23
Rudbeckia 'Prairie Sun' Benary	10.1 2-15	20.1 3-26	4.9 1-5	4.6 3-5	3.7 3-5	9.6 3-14
Scabiosa 'Fama Deep Blue' Benary	4.5 1-10	17.8 9-26	3.8 2-5	3.3 2-5	3.7 1-5	6.3 5-8
Scabiosa 'Fama White' Benary	5.0 1-12	19.4 10-28	3.8 2-5	3-6 2-4	3.4 1-5	6.7 4-8
Snapdragon 'Potomac Lavender' Ball/Kieft	5.7 1-12	20.9 8-30	4.1 3-5	3.9 3-5	3.8 3-5	8.6 3-14
Sunflower 'Giant Sungold' Benary	2.2 1-7	42.5 16-72	4.5 3-5	4.0 1-5	4.2 2-5	10.0 8-14
Sunflower 'Gold Rush' SeedSense	1.1 1-3	39.4 16-72	3.5 2-5	3.1 1-5	4.3 3-5	8.4 7-14
Sunflower 'Musicbox' Benary	2.2 1-7	21.4 12-48	2.8 1-5	2.7 1-5	4.4 3-5	7.8 6-14
Sunflower 'Procut Amber Glow' SeedSense	1.0 1-2	46.4 18-72	3.9 2-5	3.8 2-5	4.6 3-5	8.8 7-14
Sunflower 'Procut Bicolor Plus' SeedSense	1.1 1-2	46.1 18-72	4.3 3-5	4.0 3-5	4.6 4-5	8.3 7-14
Sunflower 'Procut Brilliance' SeedSense	1.0 1-2	43.8 18-67	4.2 3-5	4.3 3-5	4.4 3-5	8.8 7-14

¹ 1 to 5 scale, with 5 being the best. Market ratings are based on sales to wholesales, retailers, or final consumers direct.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ¹	Repeat again rating ¹	Ease of cultivation rating ¹	Average postharvest life (days)
Sunflower 'Procut Gold' SeedSense	1.0 1-2	45.7 18-72	4.2 3-5	4.0 1-5	4.5 3-5	9.0 7-14
Sunflower 'Procut Red/Lemon Bicolor' SeedSense	1.0 1-2	49.9 18-70	4.7 4-5	4.6 4-5	4.7 4-5	9.1 7-14
Sunflower 'Ring of Fire' Benary	2.4 1-10	32.1 18-60	3.8 3-5	3.6 2-5	4.7 3-5	7.6 6-14
Sunflower 'Soraya' Benary	2.3 1-8	32.3 14-48	3.6 1-5	3.3 1-5	4.5 3-5	8.1 6-14
Sunflower 'Valentine' Benary	3.2 1-15	28.1 12-48	3.3 2-5	2.8 1-5	4.5 3-5	8.7 7-14

¹ 1 to 5 scale, with 5 being the best. Market ratings are based on sales to wholesales, retailers, or final consumers direct.

Great Plants Start Here!




- Quality plant liners
- Exceptional customer service
- Success for our customers

Specializing in plant propagation since 1988, North Creek is proud to offer an exciting mix of new introductions and tried & true classics. Promoting sustainable outdoor environments through our superior selection of perennials, ornamental grasses, ferns and vines with an emphasis on US natives.

1. *Alstromeria* 'Eangerine Tango'
2. *Solidago* 'Solar Cascade'
3. *Echinacea* 'Milkshake'
4. *Agastache* 'Ava'
5. *Caryopteris* 'Hint of Gold'








www.northcreeknurseries.com | info@northcreeknurseries.com
388 North Creek Road | Landenberg, PA 19350 | 1.877.ECO.PLUG