



2006 ASCFG Cut Flower Seed Trials

John Dole, North Carolina State University

Sunflowers are a staple flower of many field cut operations. This American native, with its large cheerful flowers, is increasingly being grown in greenhouses and high tunnels around the country. This year we had three cultivars in the trials, all of which scored very well. 'Sunrich Orange Summer' from American Takii featured uniform, fast flowering of golden yellow petals and pollen-less dark centers. For some trialers, 'Sunrich Orange Summer' flowered up to 10 days earlier than 'Sunrich Orange' but at least one trialer said that both cultivars flowered on the same day. Stems were sufficiently long for growers to cut them to usable lengths, up to 60 inches, and respondents noted a vase life of 6 to 14 days, with an average of 8.7 days. In our postharvest trials we obtained 10 days, using a holding preservative.

'Premier Lemon', also from American Takii, scored a little lower than 'Sunrich Orange Summer'. While it was very fast flowering, the stem length was too short for many respondents. In some cases, the length was as short as 12 inches, but the average was 27 inches. In our trials the stems flowered by mid May after transplants were put out in mid April, a very short crop time. Respondents noted a vase life of 6 to 10 days, with an average of 7.8 days. In our postharvest trials we obtained 12 days using a holding preservative, and only 9 days using just water.

'Solara' from Benary scored well in all categories. It was uniform, fast flowering with golden yellow petals and pollen-less dark centers. Stems were long, up to 60 inches, and respondents noted a vase life of 7 to 12 days, with an average of 9.3 days. In our postharvest trials we obtained 12 days using a holding preservative, and only 9 days using just water.

Eryngiums are fascinating plants - prickly appearing but with great, interesting colors that look almost metallic at times. Eryngiums have been popular in Europe and we tested a couple of cultivars in the perennial trials over the years. Unfortunately, they did not perform well for many people – the plants seemed to be rather susceptible to root rots and took a long time to reach flowering size. Plus, marketing a prickly thing isn't always the easiest. Well, the difference a little breeding and selection can make. Eryngium 'Blue Glitter' from Benary performed very well in the trials. For those of us who could start the plants early enough, they flowered rapidly, producing one to several stems per plant. Here in North Carolina, plants flowered by mid June and lasted several weeks. We sowed the seed at the



end of January. Certainly this is part of the trend to “annualize” perennials – shortening crop time and removing the need for a winter cold period to induce flowering. Germination was good and plants were quite uniform for most of us. Others reported that some plants did not flower. Many of our plants flowered so much that there wasn’t much plant left by the end of the season; however, we noticed some plants putting on a rosette of leaves in the fall. It will be interesting to see what overwinters. Trialers that did not get flowering this year noted that the plants were healthy and were hoping to get flowering next year. The most “interesting” observation was that the cut stems had a peculiar smell. One trialer reported a smell “like cow manure”. Another trialer stated that “It was the pollen, as I never smelled it in the field, one event florist just rinsed the whole bunch of it off under water, and had no further problems.” People’s reactions to smell often vary greatly and this may be the case as many trialers did not mention an odor.

It was a thorny year – not in terms of weather but in terms of plant materials. The mildly prickly eryngium and cleome weren’t too bad but the pumpkin-on-a-stick (*Solanum integrifolium*), submitted by Fred C. Gloeckner, was in a

ripen by frost. The fruit were carried along one to four foot tall plants. The plants were somewhat branched, making where to cut a difficult question, but the average number of stems per plant was about three. Grower responses to the pumpkin-on-a-stick ranged from quite positive to quite negative, as were customer responses. The stems were also a very attractive dark burgundy. The leaves were large, unattractive and bug magnets but that was not a major problem as the leaves were removed to show the fruit. The fruit were generally long lasting with trialers reporting an average of a 19 day vase life.



category of its own – one trialer said they were as brutal as roses. These unusual plants had great orange fruit that resembles squatty pumpkins. The fruit started out green and ripened to deep reddish orange. Some trialers didn’t wait until they were ripe to harvest them but sold them green. Unlike pumpkins the fruit were soft and would overripen to mush in some cases. For those with short growing seasons, however, the fruit did not



Continuing with the solanaceous theme – we also had three ornamental peppers from Fred C. Gloeckner in the trials. The best two appeared to be ‘On Top Round Red’ and ‘On Top Round Bronze’ with small round fruit perched on the top of the plant (just as the name says). Our favorite was ‘On Top Round Red’, but the two cultivars were very similar. The fruit started out very dark purplish black and ripened to red only at the very end of the season for us. Those in cooler climates did not see the fruit ripen at all. We liked the black fruit very much – the stems were also dark purple. By the time the fruit ripened, however, some looked old and wrinkled. The stems were a bit short, averaging 17 inches, but trialers were able to get a little fewer than five stems per plant. As with all peppers the leaves are best removed because they wilt rapidly. In our postharvest trials the cut stems lasted at least ten days with the average being 14 to 16 days, depending on the treatment. Trialers reported 7 to 14 days with an average vase life of 11 days.

One of the fun parts of the trial program is guessing how a plant will be received and occasionally we get it very wrong. Case in point was the ‘Rubysilk grass’ from Cramers’ Posie Patch. This beautiful plant impressed us with its color and texture but the multitude of thin stems left us wondering how to harvest it. We decided to harvest handfuls at a time and thought that the trialers wouldn’t like that. Well, many folks didn’t mind at all and loved the grass. Turns out others were doing the same thing we were and using handfuls of both the flowers and leaves for filler in bouquets. Calculating number of stems per plant was a bit tough so you might want to be a bit skeptical about that data point in the table. We counted the stems on a few plants – resulting in over 200 stems/plant – yes, it was very productive. Others apparently counted just the number of handfuls as one trialer reported just one “stem” per plant. Stem length averaged 24 inches, suitable for a bouquet flower. Several respondents comments on the weak stems and mentioned lodging as a problem. Vase life was reported to be a respectable 12 days.

Overall, we had 23 cultivars from seven companies – the number of cultivars and companies were down from last year but we had more trialers than we have ever had participating in the trials. 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 (average of wholesale, florist, and consumer) + repeat again + ease of cultivation for those cultivars where more than three trialers responded. Thus, from the 2006 trials *Eragrostis* ‘Rubysilk’, *Eryngium* ‘Blue Glitter’, and Sunflowers ‘Premier Lemon’, ‘Solara’, and ‘Sunrich Orange Summer’ are nominated as Cut Flowers of the Year and will join other nominations from ASCFG members.

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 evaluators who returned their trial reports and to the seed companies for providing such great cultivars. I would like to thank Ingram McCall and Diane Mays for taking care of the North Carolina State University portion of the trials, Ingram McCall for data entry, Erin Possiel, Tina Krug, Beth Harden, Brad Holland, and Tim Ketchie for assisting with the NCSU trials, and Nick Corby and Helen Kraus for laboriously typing in everyone’s comments. In preparing the report I have edited the participants’ comments for space and clarity; my apologies if I’ve altered the tone or content of anyone’s comments. Also, in a few cases we could not determine what was written.

Participating Seed Companies

American Takii

301 Natividad Rd.
Salinas, CA 93906
www.takii.com

Benary Seed

1444 Larson St.
Sycamore, IL 60178
www.benary.com

Cramers’ Posie Patch

116 Trail Road North
Elizabethtown, PA 17022
www.cramersposiepatch.com

Fred C. Gloeckner

600 Mamaroneck Ave.
Harrison, NY 10528-1613
www.fredgloeckner.com

Kieft Seed

P.O. Box 618
Conway, WA 98238
www.kieftseeds.com

Goldsmith Seeds

P.O. Box 1349
Gilroy CA 95021
www.goldsmithseeds.com

PanAmerican Seed

P.O. Box 438
West Chicago, IL 60186
www.panamseed.com

Participating Growers

Janet Bachmann

Riverbend Gardens
Fayetteville, AR

Keith Baldwin

NC A&T State University
Greensboro, NC

Christof Bernau

UCSC Farm & Garden
Santa Cruz, CA

Chantill Recker

University of Wyoming
Sheridan, WY

Lynn Byczynski

Growing for Market
Lawrence, KS

Leon Carrier

PlantMasters
Gaithersburg, MD

Linda Chapman-Dale

Harvest Moon Farm
Spencer, IN

Maureen Charde

High Meadow
Flower Farm
Warwick, NY

Kelly Comer

Johnny's Selected Seeds
Winslow, ME

Phyllis Dail/Peg Godwin

Dail Family Farms, Inc.
Snow Hill, NC

Connie Dam-Byl

William Dam Seed, Ltd.
Dundas, ON

Everett Emino

Everett's Flower Farm
New Germany,
Nova Scotia

Chas and Linda Gill

Kennebec Flower Farm
and Nursery
Bowdoinham, ME

Peg Godwin

North Carolina
Cooperative Extension
Kinston, NC

Paula Grote

Texas Bloomers
Pearland, TX

Sharon Hampton

PanAmerican Seed
Santa Paula, CA

Nancy Hanmer

Greystone Farm
New Oxford, PA

Paula Harman

Harman's Farm Market
Churchville, MD

Chaz Hesselein

Extension Horticulturist
Alabama Cooperative
Extension System
Mobile, AL

Betsy Hitt

Peregrine Farms
Graham, NC

Laurie Hodges

UNL Agronomy and
Horticulture
Lincoln, NE

Kathy Horn

Celebrate! Gardens
Lindenwood, IL

Polly Hutchison

Robin Hollow Farm
Saunderstown, RI

Cathy Jones

Perry-winkle Farm
Chapel Hill, NC

Ingram McCall, Diane

Mays, John Dole
North Carolina State
University
Raleigh, NC

Jim Mercer

Sheepscot Flower Farm
Newcastle, ME

Kent Miles

Botanicals by K & V
Seymour, IL

Diane Minard

Minard's Glen
Cut Flowers
Valencia, PA

Amanda Muller

Paradise Specialty Cut
Flowers
Paradise, TX

Suzy Neessen

The Flower Farm
Cedar Falls, IA

Kathryn Nygren

Poverty Hills Farms
Lincoln, NE

Susan O'Connell

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Hardwick, VT

Carolyn Ramsbotham

Riverview Farm
Madbury, NH

Brenda Smith

Smith & Smith Farms
Dayton, NV

Kim Smith-Potts

Honeydale Flower Farm
Skandia, MI

Vicki Stamback

Bear Creek Farms
Stillwater, OK

Kate Van Ummersen

Sterling Flowers
Brooks, OR

Cheryl Wagner

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Farms
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Chris Wien

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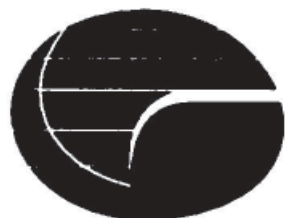
2006 ASCFG Seed Trial Results. The first row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed, either only one person responded for that category or several responded and all gave the same rating. The single highest score and the single lowest score in each category for each cultivar have been dropped.

Company/Cultivar	Yield Stems/plant (inches)	Stem Length (inches)	Market appreciation rating ¹			Repeat again rating ¹	Ease of cultivation rating ¹	Average spacing (in. ² /plant)	Average postharvest life (days)
			Wholesale	Retail	Consumer				
American Takii									
Delphinium 'Aurora Light Purple'	1.2 0-1	24.8 20-36	-	5.0 5	4.0 4	4.2 3-5	3.2 2-4	136.8 36-216	10.3 9-12
Kale 'Bicolor Crane'	1.0 1	20.0 19-22	4.0 4	-	3.8 2-5	4.3 4-5	3.7 3-4	88.3 64-120	13.0 11-14
Sunflower 'Premier Lemon'	1.0 1	27.0 12-48	4.3 4-5	4.4 3-5	4.0 3-5	3.6 1-5	4.5 3-5	94.8 24-208	7.8 6-10
Sunflower 'Sunrich Orange Summer'	1.0 1	37.6 23-60	4.8 4-5	4.6 4-5	4.4 4-5	4.3 2-5	4.6 4-5	86.2 25-162	8.7 6-14
Cramers' Posie Patch									
Eragrostis 'Rubysilk'	29.3 1-225	24.9 17-36	3.8 3-5	3.5 3-5	3.8 2-5	3.5 1-5	4.6 2-5	94.2 32-204	12.3 7-30
Ernst Benary									
Snapdragon 'Animation Royal Purple'	6.1 6-8	17.9 15-24	3.0 2-4	3.0 2-4	3.8 3-4	3.7 3-4	3.7 3-4	128.1 81-144	8.2 9-9
Eryngium 'Blue Glitter'	1.8 1-4	16.3 13-18	4.5 4-5	4.7 4-5	3.6 3-4	4.0 2-5	4.3 3-5	121.1 36-192	11.9 7-18
Sunflower 'Solara'	1.0 1	41.2 24-60	4.8 4-5	4.8 4-5	4.5 3-5	4.1 1-5	4.4 3-5	96.5 24-208	9.3 7-12
Fred C. Gloeckner									
Pepper 'On Top Candles Red'	3.5 1-9	13.9 6-18	3.0 1-4	3.6 3-4	3.6 2-5	3.6 1-5	4.2 3-5	114.3 36-216	11.4 4-14
Pepper 'On Top Round Bronze'	3.6 1-10	18.1 12-23	3.3 2-4	3.5 2-4	3.3 2-4	3.2 1-5	4.4 2-5	96.3 36-144	12.1 4-21
Pepper 'On Top Round Red'	4.7 1-10	17.2 14-23	3.7 3-4	3.8 3-4	3.9 3-5	3.5 1-5	3.9 2-4	138.3 81-216	11.3 7-14
Pepper 'Pumpkin on a Stick'	2.9 1-5	25.0 15-48	1.5 1-2	2.7 1-4	3.4 2-5	2.7 1-5	3.7 2-5	113.1 36-144	19.0 12-28
Goldsmith Seeds									
Cleome 'Sparkler Blush'	5.0 3-7	15.0 14-16	1.5 1-2	1.5 1-2	3.0 3	1.3 1-2	3.7 3-4	96.3 64-144	6.0 6
Cleome 'Sparkler Lavender'	5.7 5-6	14.3 14-15	2.0 2	1.5 1-2	2.7 2-3	1.3 1-2	3.7 3-4	111.0 81-144	6.0 6
Cleome 'Sparkler White'	4.3 3-5	14.5 13-16	2.0 2	1.5 1-2	2.7 2-3	1.3 1-2	3.7 3-4	111.0 81-144	7.0 6-8

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

Company/Cultivar	Yield Stems/plant (inches)	Stem Length (inches)	Market appreciation rating ¹			Repeat again rating ¹	Ease of cultivation rating ¹	Average spacing (in. ² /plant)	Average postharvest life (days)
			Wholesale	Retail	Consumer				
Kieft Seeds									
Celosia 'Bombay Figo'	0.9 0-1	19.8 7-30	3.3 34	3.3 34	3.0 2.5	2.5 1-5	3.9 3-5	113.6 36-216	9.8 7-14
Celosia 'Bombay Firosa'	1.1 1-2	19.6 9-30	2.3 14	2.6 14	2.7 1.5	2.5 1-5	3.6 34	111.0 36-144	8.8 7-12
Larkspur 'Sydney Blue Picotee'	3.2 1-12	21.9 14-38	3.0 24	3.7 2.5	3.7 34	4.0 1-5	3.7 3-5	85.8 24-168	8.1 7-12
PanAmerican									
Dianthus 'Sweet Scarlet'	5.3 0-16	14.0 9-18	2.2 2-3	3.0 1-5	3.1 1-5	2.7 1-5	4.0 2-5	98.1 36-192	9.9 7-14
Lisianthus 'ABC 2-3 Green'	2.3 1-4	17.2 9-26	3.5 1-5	3.8 3-4	3.8 3-5	3.1 3-4	3.4 3-4	49.4 25-64	12.9 10-18
Lisianthus 'ABC Lavender'	2.2 04	16.5 11-24	1.0 1	4.0 3-5	4.3 4-5	3.8 3-5	3.8 3-4	42.0 32-64	12.0 10-14
Lisianthus 'ABC White 02153'	1.3 0-2	16.6 8-28	1.0 1	4.0 3-5	3.8 3-5	2.8 1-4	2.0 1-4	46.0 32-72	13.5 10-18
Lisianthus 'ABC White GX12444'	1.9 1-4	14.8 8-26	3.0 1-4	3.3 2-4	3.7 3-5	3.4 1-5	2.8 1-4	57.0 32-81	13.5 10-18

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



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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 that many respondents did not make specific comments on each cultivar and in some cases, comments have been shortened because of limited space.

American Takii

Delphinium 'Aurora Light Purple'

Good qualities: Great color (3); Plants are vigorous, largest of those in our trial, color looks usable - medium true purple, plant is too immature to harvest full stems- this is our fault for not planting early enough; Very pretty; Delphiniums are so great and a top seller; Strong plants; Beautiful full flower stems; Grew great for us in the greenhouse, we harvested the main stem and then had side shoots that were very nice too - sold every stem.

Problems: Poor germination (2); I have powdery mildew problems with delphinium, so if I get one cut per plant I'm happy, wasn't really impressed with the color, but I'd grow again; For us it's a more productive plant in its second season; transplanted about 20 plants to the field and they did not thrive: 11 plants did survive, a couple put on late spikes, these plants may come back nicer in the spring.

Similar cultivars: Centurion and Guardian series.

Additional comments: The center, initial flower spike is almost too large to be used in anything but a gigantic arrangement so we prefer the smaller side branches; Planted in 200 cell tray on 2/13 and put in cooler for two weeks; - My customers went crazy for this, plus we were picking it into July- which was hot, we had 50% shade on the greenhouse.

Postharvest recommendations: All of my delphinium are STS-treated to prevent shattering.

Kale 'Bicolor Crane'

Good qualities: This flowering kale developed a nice bicolor (rose center surrounded by white and outer white green leaves) "flower", the stem length was great and the heads not too large, combined with broom corn and celosia, made nice fall bouquets, good customer acceptance; Can be harvested before full coloring happens, is an excellent substitute for 'White Crane', I prefer the coloring of 'Bi-Color' - the magenta centre is more pronounced - however, the growth habit of 'White Crane' is more upright - which is desirable, if spaced further apart, or if main stem is damaged, sideshoots will grow and can be harvested; Strong, sturdy plants, no disease or insect damage in a year of record disease; Vigorous, nicely shaped/spaced, able to cut for over one month; It's beautiful when properly grown - does not fit into my growing operation- too fussy?; Very cool color tones,

eye catching; We would like to add this flower to our variety list but I have so much damage from quail, rabbit, etc., that I had no saleable flowers.

Problems: Worms (3); Careful monitoring and spraying with Bt solved that problem - had flea beetles at one point but that took care of itself in a few days, some plants did not form "flowers" but formed cabbage heads so only about ~80% were harvestable as "flowers", one plant self pinched early in the growing season and made three "flower" heads on one plant, harvested it as one stem and combined with other flowers for an interesting bouquet; Same as cabbage - flea beetle, cabbage looper, black lice, but, can be treated organically if diligent - we recommend preventative spraying; Unable to get any color variation when planted in early spring; Too many problems with pests when field grown; Stem length was not as long as I had hoped, perhaps due to planting time (coastal Zone 9); I would have to grow this in a hoop house to get saleable flowers.

Similar cultivars: Other cut flower kale and cabbage; 'White Crane'.

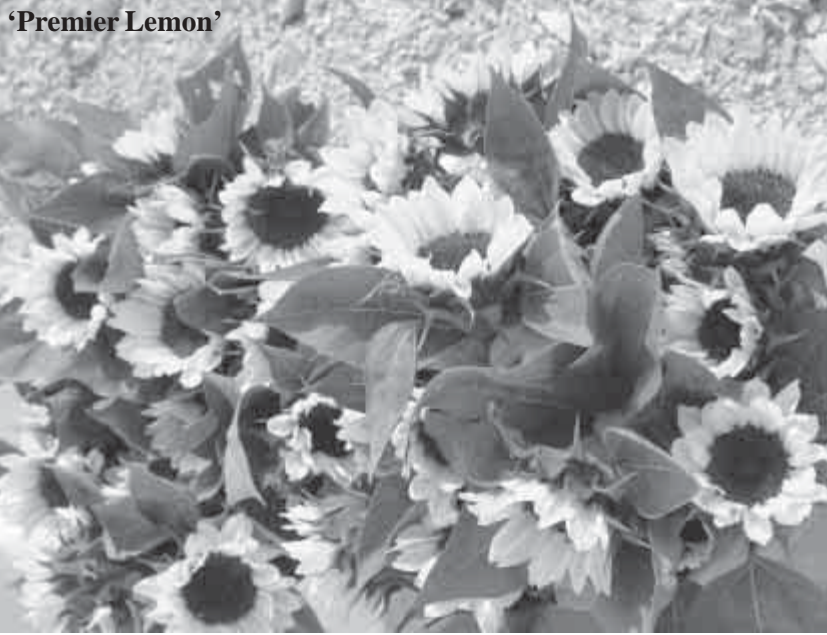
Additional comments: One customer at the farmers market thought the "flower" was ceramic and was not convinced it was real until I talked her into feeling the plant; I have yet to begin harvesting, as it is just starting to color (Zone 3); This is an odd crop that is taking some getting used to for our customers, though I really liked it myself.; One designer we work with really liked it, but no one bought it at market, I sold the stems unstripped to one person who used all the leaves in a clear vase with lemons, harlequin bugs got real bad on them, I was able to keep cabbage worms off with Entrust.

Postharvest recommendations: Long lasting; They will last for a very long time in cool temperatures - like in late autumn outdoor arrangements, above 23C/74F they soon begin to smell like cabbage!

Sunflower 'Premier Lemon'

Good qualities: Nice color (8); Short (2); Very early flowering (3); Uniform flowering time (2); Whole planting bloomed within 5 days of each other; All cut within 10 days; Harvested 6 weeks from transplanting; Appearance great for retail florist arrangements; Consistent flower size for both seedings- some helianthus in the second trial did not have this quality; Pollenless, strong stems; Upright flower position; Short easy to harvest; Good flower shape, florists always like local grown sunflower for their size and quality; Nice sunflower but my customers prefer 'Sunrich Orange'; Size of head and height.

Problems: Too short (5); Orange would be more saleable; We did not get a very good stand of this sunflower- suspect impertinent rabbits!; Too big and clunky and stems too thick, maybe with tighter spacing would be better, I would like more double, Lose one petal and it is compost, Planted with #22



Gardenway seeder like all my other sunflowers- they didn't get so chunky; Our May flood was too much for this new sunflower - under same conditions, planted 8 to 10 other varieties which grew shorter than usual but yield 24 to 30 inch stems; Bloom exceptionally small; No problems!; Hard to keep up with bugs on sunflowers, had problems with head cutter weevils.

Similar cultivars: 'Premier Light Yellow'; Procut series and Sun series

Additional comments: Stem length disappointed – definitely climate related; Bloom peak 8/21, one week earlier than 'Solara', I loved the silky and substantial feel of the petals, stems could have been cut as long as 5 feet, but no need for such long stems at farmers' market; Do not like wet springs; Would grow again!

Postharvest recommendations: Cut just when petals start to lift and unfurl from bud; Little preservative, lots of water;

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Sunflower 'Sunrich Orange Summer'

Good qualities: Uniform (6); Nice color (6); 7 to 10 days earlier than 'Sunrich Orange' (2); Easy to grow (2); A nice addition to the Sunrich series (2); Appearance great for retail florist arrangements; Not too tall, nice petal shape; Same great quality as 'Sunrich Orange'; 4 to 5 inch blooms with orange-gold petals and small dark center, pollen-free, some secondary branching not useful; Classic sunflower; Long vase life, the first of all my sunflowers ('Sunbright', 'Procut', 'Sunrich') to bloom; Sturdy stem, quick to bloom, overlapping petals and attractive bloom;

Big flowers, easy to work with! perfect height!; Not significantly different than other Sunrich cultivars, but we really liked the brown unopened disc flowers; Bloomed 60 days from seeding; Size of head, and height; Under summer growing conditions, performed well, producing strong stems and large, attractive heads (7.5 cm disk diameter), about 4 to 7 days before 'Sunrich Orange'.

Problems: None (2); Not as early as 'Procut Orange'; Stems less thick than other sunflowers, flowers smaller - We just like others better, erratic germination; Too big and clunky and stems too thick, maybe with tighter spacing would be better, I would like more double - lose one petal and it is compost, planted with #22 Gardenway seeder like all my other sunflowers- they didn't get so chunky; Small bloom size; Some erratic opening of ray flowers - non uniformity; Had some rabbit damage, why the yield was low - I row cover sunflowers to keep rabbits out, this is troublesome; Like 'Sunrich Orange', this variety is photoperiod sensitive, flowering 19 days earlier under short day conditions than if treated by long days in the seeding stage, with much shorter plants and smaller flowers (disk diameter 3.8 cm) - so if you want an early crop of sunflowers in a tunnel, this one will be too short and small to be attractive. The photoperiod treatments were applied by exposing the seedlings to either 12 hrs.

or 16 hrs. in the first three weeks after emergence, then planting the seedlings to the field.

Similar cultivars: 'Sunrich Orange' (3), 'Sunbright' and 'Solara'; 'Pro-cut', which survived the frost!

Additional comments: Stem length disappointed – definitely climate related; A viable commodity to compliment 'Sunrich Orange', the finding of consistent

quality in the later seeding is contrary to the recommendation from breeder, who said that it was suited to long day production only; Could harvest one longer stem, or cut first, shorter stem with good development of side shoots; My florists love local sunflowers because of how they last and no shipping damage, my farmers market customers can't believe how long they last; You can't go wrong with sunflowers! Everyone loved them!; Although this was billed as 10 days earlier than 'Sunbright', they bloomed in the same day for me, both grow in unheated high tunnel; I will probably try more of this throughout the season to get a true feel from customers if they like it or not; Seeded directly to a 128 cell tray 4/20/06, harvest period 6/21-7/8; I like how they didn't all bloom on the same day, nice color.

Postharvest recommendations: Cut just when petals are starting to lift and unfurl from bud; Clean, cold water; Little preservative, lots of water; I cut all my sunflowers into warm water with Chrysal Professional #2 solution and let them sit for 6-8 hrs, then they go into the cooler.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Eryngium planum 'Blue Glitter'

Good qualities: Great smokey blue color (5); Great germination (3); So pretty, I like the small, bushy look of it; Plant is vigorous - If I had started before March, as recommended by breeder, I could have reported on the flower stems too - Fleuroselect Gold Medal 2007 speaks well for the improvement in Eryngiums; Reasonable number of stems for this perennial in its 1st year, great flower for bouquet, great vase life; Not all plants threw flower stalks, not sure why most threw one stalk- a few 2-3, hardy, easy, hope it will come back next year; Adds texture to bouquets - stems were short but am hopeful they will be longer next year; We did not get this planted early enough for 1st year blooming, it is just sending up flower stalks (10-7-06), looks like it will be a great flower; We have never grown eryngium before so we don't have any comparisons, but we were very happy with this plant and the flowers - They started blooming late in the season, they seemed quite frost hardy, took several light frosts - The plants grew well, we hope they will over winter and produce well next season, definitely a good addition to our varieties; Productive; plants are still alive so we think it will be taller next year, it might have been taller if it had gone out in the fall instead of spring; Looking for more stems and greater length in next year; Hardy plants, good growth.

Problems: Some did not have a stem until October; On 8/28 green - no sign of blue yet, 9/8 some flowers showing blue, 9/12-9/16 used in bouquets nice long stems - side branches also useful for smaller bouquets; Came into bloom late in the season - hoping it will overwinter here in Zone 5 and be more prolific in the 2nd year- will report back; Is somewhat smelly, not enough to turn us off; Somewhat difficult to work with - sticky and rigid; It stinks but customers said no worse than caspia.

Similar cultivars: Other *Eryngium planum*s; *Echinops retro*; thistle; Common sea holly.

Additional comments: I would plant much closer together next time, especially if treating as an annual; Will always grow; Dried very well- we air dried a few stems- excellent color retention; Needs a more sophisticated consumer to appreciate;

Sowed 2/20/06 in 128 tray and harvested 9/15-10/15; This one really surprised us, it did very well, customers loved it and every stem sold even the short ones; I am eager to see how this flower performs next year!

Postharvest recommendations: I had several comments about how they 'smell like cow manure' (in fact, several people thought I had used cow manure to grow them!) - It was the pollen, as I never smelled it in the field, one event florist just rinsed the whole bunch of it off under water, and had no further problems; Always use Hydraflor 100 Floralife, though this variety requires little special handling.

Snapdragon 'Animation Royal Purple'

Good qualities: Outstanding color (5); Sturdy stems (2); Had many comments!; Large heads; Nice appearance, customers liked it; Reasonable resistance to rust, good vase life; Color was very nice and haven't grown a snapdragon that color.

Problems: For most of the season this cultivar was largely un-saleable, stems were very thin, flowers not full and robust, grew this alongside another "purple" cultivar (another seed company) - the other was same magenta color but very prolific with fat stems, good stand, full flowers, while the trial brand color paled by comparison; Stems per plant, the petals didn't always open fully!; Dry and heat of summer made for long come-back after first cuttings; Stems sometimes broke during harvest foliage stripping; We did not net, stems were not as strong as 'Spring Giants' which is our standard snap we grow, could have harvested more stems but the stems were too bent, so it was quite productive; Color was nice BUT no way a "Purple"! Who names these colors anyway - get a color chart! More like a magenta, finally started to get nicer-looking late in the season with cool fall temps.

Similar cultivars: Potomac did MUCH better for me in the field -

they were phenomenal!

Additional comments: Late season cuts were fairly decent but stems still thin; Will grow again, such a beautiful deep color- it adds to the mix of snaps offered at the farmers markets, also got a second flush of darker stems in the fall; Didn't grow well



in our area, weather is too hot in the summer! They started really coming on in fall, when customers were limited; Good germination; I didn't like the color- prefer dark red; If this is like the other 'Animations', it will be good and I'm sure customers will like it; Sowed in greenhouse 2/13/06, transplanted to 200 cell tray, harvested from 57 plants, harvest period 6/22-7/12.

Postharvest recommendations: Store cool and very upright (to avoid bending stems).

Sunflower 'Solara'

Good qualities: Good color (6); Pollenless (3); Sturdy stems (5); Color and appearance great for retail florist arrangements; Excellent germination and plant health, consistent flower shape and size, flowers smaller from second planting, excellent plant health; These tend to face more upwards than other sunflowers which makes them great for all-sided bouquet, great bouquet sunflower; A spectacular flower! A favorite! Large 6 inch blooms have rich orange petals and a very large, very dark center (one of its nicest attributes); Good 4 foot height, strong neck; Flower big and bright, easy, height!; Nice petal size, long lasting; Easy; Thick petals, an excellent early-season sunflower; One of the prettiest sunflowers we grew this summer, the dark centers really set it off; The same color as 'Sunrich Orange', performs like 'Sunrich Orange' - a little shorter crop time and overall its just a little shorter in height than 'Sunrich Orange'; Very uniform; Crisp appearance; Size of head and height, wholesalers like the head size.

Problems: None (4); Not as early as 'ProCut Orange'; Had a few heads that didn't open evenly, cause unknown; Blooms coincided with our annual influx of corn rootworm beetle, even without pollen, the beetles chewed petals if we did not harvest early (just as they opened) and often; 'Sunrich Orange' is "softer" and better looking; Too short too cut, small flowers, did not cut - Our May flood was too much for this new sunflower, planted 8 to 10 varieties (Sun series and Procut series), they grew (same conditions, shorter than usual, but cuttable 24 to 30 inches); Early fungal disease, petals not open always completely; Hard to keep up with insects on sunflowers this year, had problems with head cutter weevils; Had a lot of leaves on the head, which I didn't particularly like; Seemed to stretch more than 'Sunbright Supremes' when growing transplants.

Similar cultivars: 'Sunrich Orange' (3); Similar to 'Procut Orange' except about 2 weeks later to bloom; 'Procut Orange', but better! For early crop, 'Solara' has stronger stems, necks and thicker petals; Would strongly consider growing along with the Procut series; 'Sunbright Supreme'.

Additional comments: Stem length disappointed - definitely climate related; In the field was a few days later than 'ProCut

'Orange', in the high tunnel, matured at the same time - In the field, 'Solara' had a lot of off-types, misshaped flowers - in the high tunnels, the flowers were normal. 'Solara' was shorter than 'ProCut' in a late September harvest in the high tunnels - about 30 to 36 inches and actually was a nicer, more uniform stem diameter, etc. cut; Seed is fairly expensive; Peak bloom 8/28, stems could have been cut as long as 5 feet, but no need for such long stems at farmers market ; Good orange-yellow color, nice contrast between center and rays; This is a real beauty!; Flower looks more pointed and sharp" than 'Sunrich Orange', more "pleating" each petal; Did not like wet springs; It did not seem that different from what I already grow, I would try it again though I find the 'Pro' series has problems- for me anyway - with petal drop-making, they are harder to sell at farmers markets; Great plant!; If Benary wants to compete with 'Sunrich Orange' they will have to beat them in price too - 'Solara' can definitely compete with 'Sunrich Orange'; Seeded directly to a 128 cell tray 4/20/06, harvest period 6/26-7/8.

Postharvest recommendations: Cut just when petals are starting to lift and unfurl from the bud; Plain water.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Cramers' Posie Patch

Eragrostis teff 'Rubysilk'

Good qualities: Very gorgeous red seed heads (7); Great fresh or dried (4); Lovely flowing pendulous stems; Quite showy; Regrowth strong, easy to sow and transplant; Rubysilk teffgrass makes a wonderful addition to bouquets adding a graceful appearance, very productive, great in bouquets, straight bunches; Red florets are a great improvement to *Eragrostis*, easy to use as a filler in autumn arrangements, glowing color - like satin embroidery threads, just beautiful! Dries true to color and holds the seeds so it isn't messy; Aptly named - this grass was a ruddy-red color and silky to the touch, graceful arching, pretty - especially hanging over edge of vase, long season of usefulness; Beautiful crop, very abundant, dried well if harvested early enough; Very fine, hope to clear cut and straight bunch, too fine to be useful in bouquets; 2nd crop after 1st cutting nice red for a grass; The one time I brought it to the market people noticed its reddish hue, they thought it was interesting, but went on to choose something else; Rapid bloom; Gave an airy quality of movement to bouquets - the color was very pleasing for a grass - it did come back for a second flush in the fall; Used it in floral arrangements! Looked great!; Pretty seed head, looked nice in bouquets; Unusual; In a mixed bouquet 'Rubysilk' adds a very fine, lacy quality, nice subtle red color; Nice form, makes an unusual filler; It's beautiful and I love it but my customers don't, they will buy Johnson grass before the Rubysilk; I wish I had planted it later for a more autumn look, we didn't use it in the summer because we had much

brighter colors and it didn't show up in the bouquets - We would like to try it again later, I am sure we could have harvested many more stems, it was very productive; Sowed seed in 72's, harvested whole plant, made 1 bunch, wholesalers loved it, able to have two cuttings on crop; Beautiful, beautiful, beautiful! Graceful, I want to grow the grass every year.

Problems: Lodging and more lodging (4); None (2); Since I had never grown anything like this before, I planted it too close together, better results were obtained with plants I placed in the flower garden in front of the house with more spacing, next year I would provide netting for support and greater spacing, after lodging there were fewer useful stems, tedious to pick; Perhaps, if this is like other Eragrostis, we will find many more self-seeded next year?; Fell over in an early summer wind/rainstorm, was difficult to harvest after that, would grow with support in the future; Very labor intensive to harvest, flower very small; Pretty long lasting, soft good color, too much handling but customer liked it; Didn't get any germination on this, but saw it at Ralph's and would grow again, next time I'd also seed into plugs and transplant; The water turned sour and smelly in 24 hours if a large bunch is used in bouquets during warm weather, difficult to use in mixed bouquet, slow to harvest since stems are so thin, needs support or will fall over; Wispy, it takes too many stems to make a sizeable bunch; Heads too small, needed netting to maintain erect plants; Hard at first to know how to cut it and how to use it in bouquets, a little bit goes a long way as I would not plant as many plants next year, we cut it by grabbing a clump and cutting at the base of the plant; Too fine - had to use many stems in bouquets; Hard to cut and clean, we cut large handfuls to sell, wasn't a great seller; Specialty uses; Challenging to clean up later, foliage and some lodging; Stems are thin which makes it difficult for cutting and designing, we prefer to sell native grasses for the height and stem size; We can't seem to keep it from falling over - even with netting - I don't know if we are planting it too close which is making it weak; This grass really turns a bouquet into a stunning bouquet, both my customers and I missed that special look.

Similar cultivars: Not that I grow; No; Similar to cultivated teff varieties.

Additional comments: Too wispy for most of my customers, a little more popular in October; Teffgrass was very popular, sold it in bouquets, bunches, and as plants in 5 inch pots; Successfully used as filler in containers; Please nominate this for cut flower of the year- we loved it!; Dogs love it, my dogs took bites before they flowered and humorous dogs at the market took swipes at it - Don't understand the attraction although my dogs like millet and broom corn leaves too; The best looking annual grass we have grown; Our new kitten thought it the best cat toy ever! Maybe it has a future alongside catnip and wheatgrass for pet owners; We also dried some - alone it's not so pleasing but mixed with other grasses, larkspur, yarrow (we

did a dried bouquet like this) it gave that same sense of movement as it did used fresh; Great color and great filler for arrangements! So easy to grow!; I won't grow it again if my customers won't buy it; After first flush of blooms, the plants were cut back to ground, leveled, another flush of blooms within approximately 3 weeks.

Postharvest recommendations: Clean, cold water; Easy to handle/needs little special care; Tested with drop of bleach in water, after two weeks as beautiful as time of cutting,

Fred C. Gloeckner

Pepper 'On Top Candles Red'

Good qualities: Great color (2); Great germination, easy to transplant, made nice looking plants; Peppers are always fun to have in the fall for variety, this variety seems to be a little later than the starburst red, very easy to grow; Peppers in cluster ripen at same time, nice size clusters; Interesting shape gave texture to fall bouquets, we sold many bouquets of just peppers at the farmers market; This was a nice pepper, we are excited about this pepper, the peppers were nicely clumped on top as the variety suggests - Since we have a short season, we cut them all regardless of color before frost was expected and held them for up to a month; This one was different but nice - If I had to choose, I'd grow the on top red instead, these were shorter but still nice; Easy of harvest- complete stem novelty item for market.

Problems: Very short (2); Although the plants grew well all summer in the rows they did not flower until mid September (Zone 5), this was one week before our first light frost which took the tops of the plants and ended all chances of a crop, these plants did not get any supplemental fertility as they were lush green and growing vigorously; I sell to a summer market - Red is not a good color; Didn't get nearly as tall as the on top bronze, planted in same conditions; Seedlings grew very slowly, plants never fruited (Zone 3); Uneven and poor germination, several plants had peppers throughout the branches rather than in top clusters; None; We grew our ornamental peppers in large containers this year so it severely decreased the stem length across the board; Was not real tall for us but taller than what I expected; should of planted earlier in season; Didn't seem to have any good qualities, very woody, most short 10 inch and some 15 inches tall.

Similar cultivars: Other peppers did not do well this year; 'Starburst Red'.

Additional comments: Perhaps we did not have enough heat up here in the cold and frozen north for some cultivars of warm season crops; Growing ornamental peppers is a gamble for me, even in the tunnel (Zone 4), by the time they change color we've either had frost or I have nothing left but the peppers and pumpkins-on-a-stick to go to market with - I could help this by

getting them in the ground a little earlier I guess; Unseasonably cool and wet weather all summer made all my warm weather / greenhouse crops languish; I wish I had pinched out the center growth earlier - we may have gotten longer stems - I still find 'Nippon Taka' the best pepper to work with in bouquets but will definitely try this one again; Good, upright fruit held above the foliage, perhaps not tall enough to make a really good cut;

Postharvest recommendations: We placed in Floralife, had no problems with droopy leaves.

Pepper 'On Top Round Bronze'

Good qualities: Customers loved them mixed in bouquets; Small peppers were nice addition to bouquets and arrangements; We had a cool wet spring so we got a late start on peppers, was the best pepper I have grown in many years, colored up well and easy to strip leaves by hand; Bronze was a nice color, but so was the immature purple, the branching habit provided twice the number of usable stems; Nice, interesting addition to fall bouquets; Loved the color! So did my customers, we grew it in plastic and it did great, no problems, easy to grow, nice long stems; Easy of harvest, novelty item for markets, good interest; Attractive black pointed fruits when immature, dull red when mature, Fruits borne at end of branches to produce moderately long stems.

Problems: Too short (2); I sell to a summer market - these would do better for fall; Peppers dropped before fully colored; Bad germination, both Bronze and Red were black! And thus pretty ugly, gave a few to a restaurant account just for novelty, did take to market, half loved it for novelty, half hated it for "weird" black; Mine were black not bronze, so still saving a few to see if they change color as they age; Removing leaves - slow; Mostly a dark bronze - expected more orangish color; Too short; Hornworm; Toppled - need support net; Has some insect problems in summer, but thrived as September approached; Didn't plant sooner in season, didn't get full color, next year plant earlier; Main stem shorter than basal branches, not useful if long stems are desired, mature ripe fruits not attractive: wrinkled, scarred; Didn't seem to have any good qualities, very woody, most short 10 inches, some 15 inches tall; Unable to grow/sell.

Additional comments: They sold late season bouquets when the market is slow; I would grow again; The plants grew to 32 inches, flowered and then sent up new growth to 44 inches, so there were two layers of peppers; I will need to grow a lot more of this next year; Topping of plants at 6 or 8 main stem nodes might be useful; I liked the peppers better when they were still black - the bronze looked rotten.

Postharvest recommendations: No special handling needed; More than 2 weeks in water, keeping in water initially keeps fruits from wrinkling.

Pepper 'On Top Round Red'

Good qualities: Nice clusters of fruit, slow to color, very uniform height; Tall plants, interesting fruit shape; This would seem to have so much potential but...; Customers loved them mixed in bouquets; Multiple peppers in clusters, nice size/shape of peppers; For me this pepper had dark foliage and the pepper started out black before turning red, the round shape was interesting; Nice addition to bouquets and arrangements; We picked when the pepper was black, our season wasn't long enough to get the red, but we loved the black - We were thrilled with this pepper, lots of stems fairly long stems for our conditions; Same as the bronze but this one was even better, great for fall, it would sure be nice if these would defoliate themselves!; Attractive black round fruits when immature, dull red when mature - Fruits borne at end of branches to produce moderately long stems, slightly earlier than 'Round Bronze'.

Problems: Too short (2); I did not pinch as directed, consequently the fruits are all in the foliage and difficult to see, slow to color, relative to 'Black Pearl'; These did not reach maturity before frost (Oct. 10) - the peppers were still black - The plant continued to grow past the first flowering, so fruit was set half way down the stem, a second flowering did not mature into fruit; Many - things like wind, trampling deer, moisture - too much & too little, essentially we had crop failure - not due to any inherent problems with the plant genetics (I think), but due to "outside pressures"; Our season is too short (Zone 5) for this pepper to turn red, used before turning red in bouquets, removing leaves is time consuming; seedlings grew very slowly, plants never fruited (Zone 3); Uneven and poor germination; None; Many were more black than red in color; The red shriveled before the top layer of peppers was ready to harvest; Main stems shorter than basal branches, not useful if long stems are desired, mature ripe fruits not attractive: wrinkled, scarred; Unable to grow/sell.

Similar cultivars: 'Black Pearl'

Additional comments: For us the fruits were slightly elongated ovals; Would like to try these again next year; Added interest to late season bouquets; Unseasonably cool and wet weather all summer made all my warm weather / greenhouse crops languish; Peppers were glossy black instead of red; People at the farmers market loved this one- they were surprised to find out it was a pepper, it was beautiful paired with zinnias in the lat summer; Needs support net in hoop house; I had one customer ask for two full buckets of these every week for all of October; Topping of plants at 6 or 8 main stem nodes might be useful.

Postharvest recommendations: Placed in Floralife; More than 2 weeks in water, keeping in water initially keeps fruits from wrinkling.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Pepper (*Solanum integrifolium*) ‘Pumpkin on a Stick’

Good qualities: Different! Best day selling them was when the Laotian needlework vendor came up to me and said “We EAT this!!” and proceeded to give me a recipe, lovely, really with green to orange fruits against a black stem; Unique plant; Interesting fruit, good color; Fun-sticks look great in an urn or suitable vase, dark stems contrast nicely with the vivid pumpkins in all shades of ripening; Lasts an incredibly long time fresh, easy to grow, plant it and forget it till it’s time to harvest, easy to germinate; Consumers loved these little peppers in fall-so cute!; This is just a fun plant to grow and customers really love using it, we planted it in black plastic this year and it loved it— growing four feet tall.

Problems: Thorns (8), as brutal as rose thorns; Large plants hide fruit until harvest, different rates of fruit coloring can be an advantage, I suppose, if multiple harvests are done; I wish they kept better, I did not have the best season for them, also, since I couldn’t get a lot per stem, they have a low sq. ft. price for the length of time in the ground; I sell to a summer market— these would do better for fall; So much rain this year, there was some rot; Leaves were large, about the size of a lady’s hand and had thorns on undersides! Leaves had to be stripped off, very top heavy in the vase though the woody stems held up held up pretty nicely in the field, had to cut with loppers! Some stems toppled with the weight but stems were still saleable; All plants lost to hard frost Sept. 9 (Zone 4) before any harvestable stems developed!; Needs lots of support; Colorado potato bugs decimated the plants; Bugs love this plant!; Unable to grow/sell, bloomed on 6 inch stems, I’m pretty sure it was due to my growing of it, I don’t know what I did wrong, but I had understood that this was an easy plant to grow from seed, I did try to follow our culture sheet directions.

Additional comments: Cucumber beetles loved the large leaves; Planted it and didn’t spray it, harvested last week, not my favorite plant - these did not seem as thorny as other time I grew it, was it a selection for no thorns? I think I need to remove early flowers to get fruit higher up to color by fall, green fruit was acceptable to florists (via wholesale buyer) as were green ornamental peppers, lime green color is not in demand this summer, darker green is (as in peppers above); I tried to grow some on white plastic and some on bare ground, as heat lovers, I think the plastic was a mistake, but the ones on plastic rotted less, the rot of early fruits before it was time to market them was a real pity; Really like these- wish the fruit set higher on the stem; This was actually the 2nd year I grew these, first year I made the big mistake of planting with support net! Do not plant these thorny devils in support net! I sold nicely fruited stems as stems, I cut less desirable stems into sections of 2-3 fruits plus a bit of stem, customers liked the

choice, as a vase item or tucked into flat table-top arrangements; Maybe not good for zone 4; I grew this last year with spectacular results, this year’s plants went in late, and then the Colorado potato beetles killed most of them before we found an effective control, those that survived bloomed, but haven’t developed fruit, not sure why, next year I’ll get it right!; Needs support net in hoop house; We didn’t have to wait for it to turn orange, my customers liked it green too; Very susceptible to both the flea beetles and blister beetles.

Postharvest recommendations: I did not place in water, stems of “pumpkins” held for weeks out of water - pumpkins would continue to ripen and change color, very slowly they dehydrate and take on a new attractiveness and character of wrinkliness!; Doesn’t need anything special.

Goldsmith

Cleome ‘Sparkler Blush’

Good qualities: Pretty bicolor pink (2); Eye appealing; Easy to grow, sheds; Good seed germination, very productive plant, kept producing until frost, might be useful as a short-lived filler in mixed bouquets.

Problems: Thorns (3); Short vase life/shatters (3); Short (3); Very poor germination in greenhouse, never made it to the field; harlequin beetles love them; The bicolor petals (older blooms are lighter) drop off when cut, so it is just a plain pink in a bouquet - though this color was nicest, these plants were weakest, fewer blooms smaller heads.

Additional comments: I have tried and tried to use/grow cleome but I think I will not try again.

Cleome ‘Sparkler Lavender’

Good qualities: Strongest of the three cleomes I trialed, color blended well with most other flowers, though it didn’t stand out; Nice color, eye appealing, nice in large arrangements; Good seed germination, very productive plant, kept producing until frost, might be useful as a short-lived filler in mixed bouquets.

Problems: Thorns (4); Too short (2); Short vase life/shatters (2); Color not very showy; Beetles.

Similar cultivars: Shorter, duller version of ‘Purple Queen’

Additional comments: I didn’t dare take this to my florists- they would have cussed me out the following week!; Nice plant.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Cleome 'Sparkler White'

Good qualities: Quite showy; Good seed germination, very productive plant, kept producing until frost, might be useful as a short-lived filler in mixed bouquets.

Problems: Too short (4); Thorns (3); Short vase life/shatters (2); Beetles.

Similar cultivars: All three cultivars of the Sparkler series are quite similar, differing only in flower color.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Kieft Seeds

Celosia 'Bombay Figo'

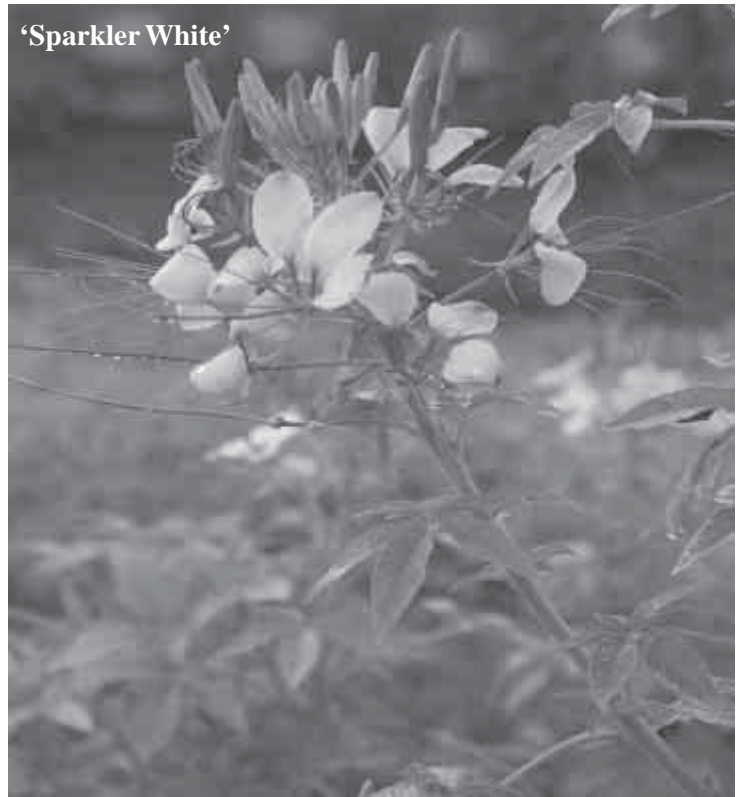
Good qualities: Uniform flowering (2); Interesting color (4); Ease of and high germination, transplants well from plugs; Spectacular form, always gets comments from visitors; Fast to bloom; There aren't any!; Long, straight stems; A great trial, large headed, thick stem - "I can grow celosia cristata" I say with a smile; Good holding in field and good stem length for a crop that is usually very short for us; Nice stem length, popular with florists and a well known flower; It's a nice celosia and it's great in the greenhouse but for the price of the seed, my customers really prefer 'Chief' celosia - I would have to charge more for the 'Bombay' to make money and compared to the 'Chief', it's just not as profitable.

Problems: Thick stems (3); Pale color not very attractive (3); Although it grew adjacent to other celosia that did well, this crop started off great but stalled after a few weeks in the rain (June was a very wet month) and never recovered, however, other celosia cultivars growing adjacent did well and produced nice blooms, this plant just stopped, made fat stems terminated by a flower that was an eighth to a sixteenth of an inch wide, certainly not useful even as an oddity; Our summer wasn't hot enough for any celosias to show their full potential; Started seeds about month earlier before planting in the tunnel that is heated, the greenhouse did not seem too cold for celosia but now I believe this was the problem, causing very short plants and one flower; Crop never grew beyond 5 inches tall- seemed stunted; Field grown - head not very colorful; Looks a little sagged if left in the field too long; Should have netted to prevent stems from falling over.

Similar cultivars: Other celosia; 'Bombay Yellow-Gold'.

Additional comments: It could be the area, wasn't impressed with this one, flowers didn't open up and fan out, stayed compact and short!; We had grown the Bombay series in the field in past years and this year we grew them in a hoop house,

'Sparkler White'



much longer stems, higher quality flowers, would recommend that growers in the north grow under cover; Are there other colors? the green/yellow color was not the most popular at markets, sold for \$2.50 stem at farmers market; These also dried very nicely.

Note: This series of celosia was intended for greenhouse production in the Netherlands and apparently does best in uniform, controlled conditions. Hence, there was a broad range in response to the cultivar in the trials, with many growers finding it far too short and a few too tall. Note the comment by one trialer that recommended growing it under cover in the north.

Celosia 'Bombay Firosa'

Good qualities: Great color (2); An odd but interesting color – not so great on its own (a mix of pale green/yellow/rose) but nice mixed with burgundies, rose, and other (solid) colors; Beautiful stem color, 8/28 – heads forming stems currently 15 inches, 9/16 – Sold 18 inch heads for \$1.50 in Portland; Fast to bloom, uniform plant blooms; There aren't any!; Nice stem length, popular with florists; It's a nice celosia and it's great in the greenhouse but for the price of the seed, my customers really prefer 'Chief' celosia, I would have to charge more for the 'Bombay' to make money and compared to the 'Chief', its just not as profitable.

Problems: Thick stems (2); Too short (2); Poor germination in greenhouse plug-flats, not terribly prolific in field, so-so customer interest ; Not very pretty; Some deformed heads,

doesn't appear to be insect or pest damage, color is very subtle and easily lost in bouquets, single stem sales most \$1.50 stem in Portland; Started seeds about month earlier before planting in the tunnel that has heat, the greenhouse did not seem too cold for celosia but now I believe this was the problem causing very short plants and one flower; Minimal rose-pink coloration in field production, unattractive leaves; Color was pale, not attractive; Should have netted to prevent plants from falling over; Very few useable stems per plot, most plants had a misshapen comb, in some cases reduced to nubbins, in others, the comb was distorted in shape and ugly, plants produced only one thick stem and no branches, quality of flower was similar in the tunnel and outside, so distortion not related to weather conditions; None, but it is best not to harvest too soon, be sure the stem hardens before harvesting.

Similar cultivars: Lack of branching similar to other Bombay series line.

Additional comments: It could be the area, wasn't impressed with this one, flowers didn't open up and fan out, stayed compact and short; I had 'Cramers' Burgundy' and 'Temple Belle New Scarlet' (Gloeckner) in the same trial, and these were much more productive and attractive than this Bombay line; Great color and unusual color which is loved by the florist, as well as my bouquet customers, I feel that it is truly a specialty cut flower.

Note: This series of celosia was intended for greenhouse production in the Netherlands and apparently does best in uniform, controlled conditions. Hence, there was a broad range in response to the cultivar in the trials, with many growers finding it far too short and a few too tall.

Larkspur 'Sydney Blue Picotee'

Good qualities: Great bicolor (9); Strong stems (4); Clear blue edging on light flowers were favorites of my customers and myself; I would grow it again along with 'Sydney Lilac'; Nothing unusual; Good stem length; Did very well in the greenhouse, we harvested main stem then had side shoots, sold every stem.

Problems: None of the larkspur was a big seller at my farmers' market; Color okay, but kind of mousy, it got lost and ends up being more a filler than focal novelty, color unimportant to me; Hard to germinate seed; Most of the plants were eaten by voles, a handful of plants survived and bloomed; More susceptible to 'black rot rot' than other larkspurs in the same planting; Should be seeded in fall and very heavily; A bit shorter than the other larkspur varieties we grew; Plants got a lot of mildew mid season/cycle; We have pretty much determined larkspur is not a crop we can grow - we keep trying and using different practices but nothing seems to work; The stems did not mature to any marketable size, it would be necessary for the seeds to be sown in the fall here in my zone 6.

Additional comments: This year was the best year I've ever had for growing larkspur, not sure why, but I had so much that I got sick of cutting it and all of it was gorgeous; We sow these in a furrow, 3 across a bed and don't use any support, all larkspurs looked great this year; Sowed 2/13/06 in 200 cell tray, put in cooler 2 weeks; Because of the delphiniums doing so well, we are adding them to our greenhouse crop plan and also plan to have many more.

Postharvest recommendations: Did tend to hold petals upon seed set better than QIS I also planted; Anything in the delphinium family really holds better with an STS treatment. Keeps it from shattering, so it lasts so much longer.

PanAmerican

Dianthus 'Sweet Scarlet'

Good qualities: Great red color (16); Very productive (4); Nice fragrance (2); Easy to grow (2); Long vase life (2); Good if client wants something more muted than pure red; Good germination, easy to transplant from plugs, good growth; Nice red shade that blended well with other shades in bouquets, nice light fragrance; Longer bloom time with longer second growth than the 'Amazon Neon Duo' that I planted from plugs; Nice large flowers; Strong stems, very long harvest window per stem and for entire crop; Heavy rebloomer; 12 days earlier than the Amazons; The red color did not sunburn, as it has done on 'Sweet Red'; Healthy plants; Excellent germination; Long production period;

Problems: Short (11); Color a bit flat (2); Color 'browns out' (2) especially in the rain; Skimpy for me this year, I grew other Sweets last year with more success, so perhaps just too late? Also, some florets opened so early, that by the time it was 50-70% open, they were dying; Grew it next to and among dianthus 'Amazon Neon Cherry', which had about eight 24 to 28 inch strong stems with large heads, but 'Sweet Scarlet' had shorter thinner more numerous stems; Should have been planted earlier; Bolted rather quickly though some rebound in fall, a supportive flower— not a focal; The stems are thin, wiry and short, I'm an Amazon fan, but I've had it with the Sweet genes, I've trialed it for 2 years and have no regard for it; Crop browned out due to heavy frost (27°F) on Sept. 9 (Zone 4), only a few stems harvested that weren't completely open; Continued to bloom through September, I'll see how it over winters; So hard to sell except in small bunches or bouquets at the farmers market; Red is not very sellable in summer bouquets, insects attacked the middle of bloom, then top appeared gone by, Amazon series dianthus was grown under same condition and no brown tops; This is the second year I have attempted growing this plant, once again, the primary bloom is tall, strong and full, subsequent stems are shorter, weaker and have smaller heads, I gave up trying to harvest and use them; Side shoots small flower heads;

Developed rust during summer months, I'm going to over-winter it in the field and see if it will come back next spring; I have seen this flower at other trial locations and it has looked better; Small heads browned out before maturation; Variable stem length; We have a hard time with dianthus in the field so always fall-plant in the high tunnel; 5 to 10 cm shorter than 'Amazon Neon Purple'; We had and could have had many, many stems from this plant; None; Not tall for us this year but we know why, we planted it in black plastic and it ended up being a hot spring (102°F in April), it would have been much happier; Didn't really care for this plant, color didn't hold well; No germination strong enough to grow on;

Similar cultivars: Amazon Neon series (2); We grew all of the Sweet series, 'Coral' had the tallest, strongest stems.

Additional comments: At first the color looks good but did not have the deep richness of 'Amazon Neon', it was weedy looking when mixed with other flowers in short bouquets when we tried to use it; Not on par with the Amazon series; We had such a beautiful crop of 'Neon Duo' with tall sturdy stems that this cultivar—both stem length and color—seemed “ho-hum”; We grew it on black plastic with the rest of our dianthus, next year I would trial it in the poly tunnel, the dianthus we grew in there was taller; I have tried the Sweet series and got same results, it is not a good type for north as a spring crop; I grew Sweet mix in unheated hoop house- planted plugs 10/20/05 and the coral and white bloomed 4/15/06, the scarlet a week later, not as big as 'Electron', but nice clear colors; The white sweet series is nice—the colors are great, its very hard to beat the Amazon dianthus for size, color and productivity; I was really looking forward to seeing these blooms.

Lisianthus 'ABC 2-3 Green'

Good qualities: Height was impressive compared to 'Mariachi'; Good green color, very consistent; Healthy plants with strong stems; They lasted a long time in a vase; Taller than 'Echo' which is my favorite; Productive when well grown, good stem length, interesting color.

Problems: Almost too tall, needed a higher netting compared to others in bed, petals not as rounded and full-looking as the 'Mariachi'; I'm not sure about the color - the white and lavender sold a lot better; I didn't get this planted until late, put under shade to help stretch but still never got tall, didn't bloom until late September, wasn't really impressed with the shade of green; Too late!; I didn't net and it fell over; The green color just doesn't do it for us, also, the stems easily bent, we could have picked more stems but as with the white, the bouquet makers pick the brighter lisianthus and only pick these if no other are available; Poor germination; Tended to lodge in the field when other varieties in the trial stood straight.



Similar cultivars: 'Mariachi Green'; I compared it to 'Rosita Green' which I love, and didn't like the 'ABC 2-3 Green' as well.

Additional comments: Good germination; I will try more ABC - good stem caliber and large flowers; Sowed in greenhouse 2/20/06 in 128 tray, harvested mid August; Zero germination;

Postharvest recommendations: ABC did poorly if harvested early, but once 2 flowers open, it was great; Chrysal Professional #2.

Lisianthus 'ABC Lavender 91863'

Good qualities: Good but slow germination, grew great little plants over the summer; Long vase life like any lisianthus; A good color, did well in our heat this year, had 50% shade on the house, I think we are holding the plants too long - this year they are short.

Problems: Slow to germinate and grow, now the season has ended the seedlings are just getting big enough to transplant with roots finally making it to the edge of the cell pack, oh so slow; Too late!; Could not get to the seedlings at all, will buy transplants next time.

Similar cultivars: Other lisianthus.

Additional comments: Hopefully I can overwinter the plants in the cold frame and get a crop next year; I really enjoyed these- they lasted a long time in a vase- they remind me of roses; Again, we grew these in our hoop house, we didn't get them started early enough but they performed well all the same; My customers still buy all my lisianthus even if its short, because its so pretty and lasts so long.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Lisianthus 'ABC White 02153'

Good qualities: Very nice clear crisp white (2); 8/28- starting to form buds now, 9/8 - terminal flowers that were open were cut off to wait for sprays; Nice size blooms I have trouble selling white flowers, but I really liked it.

Problems: Seed small, took forever to get big enough to go in the field, only got 10 plants to flower, so many other things are easier, this one not worth it, plus white flowers don't work well with other colors I grow; Even though I got this in later, I planted it in my tunnel so got decent height; Too late!; This was the weakest of the three varieties we trialed this season, they germinated poorer than the other two, were shorter and the flowers were smaller; I have always wondered if I could grow lisianthus by seed, I found out that I'll keep ordering plugs! However, it was a real challenge and I was "tickled pink".

Additional comments: Lisianthus is such a valuable crop, I'm still having trouble figuring out how to plant which varieties so I get a longer season of blooms instead of it all blooming at once; Sown in greenhouse 2/20/06 in 128 tray, harvest 8/11; To nurture my few little plants that did make it, I was proud as a mother hen to actually grow a "few" lisianthus from seed.

Postharvest recommendations: Chrysal Professional #2.

Note: Check out the separate postharvest article in this issue for more information on postharvest vase life and treatments.

Lisianthus 'ABC White GX12444'

Good qualities: Beautiful flower (2); I liked the ruffle of the petal edges; Productive when well grown, attractive ruffled petals; 8/28 - starting to form buds now, 9/8 - terminal flowers that were open were cut off to wait for sprays.

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Problems: Seed small, took forever to get big enough to go in the field, only got 10 plants to flower, so many other things are easier, this one not worth it, plus white flowers don't work well with other colors I grow; Didn't get this in until later than I should have, so didn't get very tall— Didn't bloom till late September, didn't like as well as 'ABC White 02153', but since it didn't mature like it should, not a fair assessment probably; Too late!; We could have picked more blossoms, but again because we do not net, we expect our lisianthus to 'stand on their own', they bent on the ground easily, we like the bright colored lisianthus for our uses; I have always wondered if I could grow lisianthus by seed - I found out that I'll keep ordering plugs!, however, it was a real challenge and I was "tickled pink".

Additional comments: I really liked this one, they have a long vase life; Sown in greenhouse 2/20/06 in 128 tray and harvest 8/11; Plants for tunnel trial crowded in tray before they could be transplanted, were slow to start growing; To nurture my few little plants that did make it, I was proud as a mother hen to actually grow a "few" lisianthus from seed.

Postharvest recommendations: Chrysal Professional #2.