

# 2013 ASCFG CUT FLOWER SEED TRIALS

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The top-rated performer in this year's trial was not a flower, but a fruit: Pumpkin-on-a-stick (Genesis). This well-named *Solanum* has dark stems decorated with very cool-looking miniature "pumpkins". The fruit are technically eggplants and carried on stems that averaged 22 inches long, ranging from 16 to 36 inches long. Plants produced an average of 2½ stems per plant. Vase life is very long, to the point of obnoxious. We finally threw out the last of the stems in our trials after two months. Trialers loved them for their

striking orange color and unique shape. The negatives were equally strong: thorns, thick stems that can be hard to use in foam, and pest-infested foliage. The latter is not too much of an issue as the foliage needs to be removed to show the fruit better. One trialer reported harvesting the stems with both ripe and unripe fruit for a different effect.

Open-faced snaps appear to have arrived and are holding their own against the regular snapping snapdragons. We tested two open cultivars and one regular cultivar. All three cultivars did well, producing about 7 stems per plant, and averaging about 18 to 20 inches long. The top-scoring cultivar was 'Trumpet Pink' (PanAmerican) receiving the top scores for its soft pink color, vigor, productivity and earliness. Snapdragon 'Chantilly Velvet' (Takii) was also well received for its rich orange red color, strong stems and productivity. Snapdragon 'Purple Twist' (PanAmerican) had the traditional shape, but a most unusual color with a combination of rosy purple and white. Here in North Carolina the flowers started white with purple stripes and were almost completely white when the weather

warmed. Other trialers noted that the flowers were almost completely purple in cool weather. Not all trialers liked all of the color combinations.

We had two crested celosias in the trials and one plume type. The crested celosias were 'Bombay Green' (Kieft) and 'Bombay Orange' (Kieft). The Bombays were bred for single-stem production in mild greenhouse conditions and that was evident as most trialers harvested one stem per plant. 'Bombay Green' stems averaged 17 inches long and 'Bombay Orange' averaged 19 inches; trialers reported a range in stem lengths from 6 to 34 inches. The short stems reflect that fact that Bombays can be sensitive to stunting in the flats and cold temperatures outdoors. The Bombays did well for some trialers, however. Regarding 'Bombay Green' one trialer said that "Will be growing for sure in 2014, my favourite in the ASCFG trials this year." and another wrote "This was one of the few that we needed more plants of, everyone loved the color." For 'Bombay Orange' the color was popular as well as the stem consistency. The plume celosia was 'Red Flame' (Genesis); it produced an average of around 7 stems per plant that were about 19 inches

long. Trialers commented on its great color that contrasted well with the dark foliage and its multiple side shoots. It apparently also held its form and color well as a dried flower.

We had five ornamental peppers in this year's trials from the Cornell Pepper Breeding program. The data and comments are listed in the trial report below and Chris Wien provides more details in his report on page 40.

Although the ASCFG trials are not the best test for larkspurs, 'Cannes White' (Takii) did quite well with its long spikes of pure white flowers on sturdy stems. Trialers reported an average of 2½ stems per plant that averaged 19 inches long.

Dianthus continues to be a staple field cut flower and we have had many cultivars in the trials over the years. This year we have a new color in the Sweet series, which already has a large number of colors. 'Sweet Black Cherry' (PanAmerican Seed) worked well for some trialers with stems up to 24 inches long and up to 18 stems/plant. For others, dianthus does not do well in their area or cultural system, resulting in short stems, and this cultivar suffered the same fate.



Amaranthus ‘Elephant Head’ (Genesis) got plenty of attention for its great color, strong stems, and large heads. The latter characteristic was too much for some trialers who indicated the flower heads were too large to be easily used. Trialers harvested about 2½ stems per plant, which ranged from 12 to 48 inches long, averaging 23 inches long. The wide range in stem length is fairly typical for amaranthus, with some folks consistently getting tall, robust plants. For those having problems with getting good stem length, be sure to transplant when seedlings are young and rooted just enough to hold the plug together. Delaying transplanting may cause small flower heads.

In summary, we had 19 cultivars from four companies and Cornell University. Based on trial results, the top five commercially available 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 2013 trials celosia ‘Red Flame’, dianthus ‘Sweet Black Cherry’, solanum ‘Pumpkin on a Stick’, and snapdragons ‘Trumpet Pink’ and ‘Chantilly Velvet’ are nominated for the 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 16 evaluators who returned their trial reports and to the seed companies for providing such great cultivars. Congratulations to Allison Smith, Hunny Bunny Honey and Flowers, for being the first trialer to return the evaluations. We would also like to thank Blair Lane, Luna Gu, Diane Mays, and Iftikhar Ahmad for assisting with the NCSU trials. In preparing the report we have edited the participant’s comments for space and clarity; apologies if we’ve altered the tone or content of anyone’s comments.

## PARTICIPATING SEED COMPANIES

CORNELL UNIVERSITY  
Ithaca, New York  
[hort.cals.cornell.edu/research/labs/chris-wiens-research-page](http://hort.cals.cornell.edu/research/labs/chris-wiens-research-page)

GENESIS SEEDS LTD.  
Ashalim, Israel  
[www.genesisseeds.com](http://www.genesisseeds.com)

KIEFT-PRO-SEEDS  
Venhuizen, Netherlands  
[www.kieft-pro-seeds.com](http://www.kieft-pro-seeds.com)

PANAMERICAN SEED  
Chicago, Illinois  
[www.panamseed.com](http://www.panamseed.com)

TAKII SEED  
Salinas, California  
[www.takii.com](http://www.takii.com)

## PARTICIPATING GROWERS

JANET BACHMAN  
Riverbend Gardens  
Fayetteville, Arkansas

BARB JEWELL  
Island Meadow Farms  
Prince Edward Island, Canada

CHRISTOF BERNAU  
UCSC Farm & Garden  
Santa Cruz, California

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

TANIS CLIFTON  
Happy Trails Flower Farm  
Dennis, Mississippi

ED PHILLIPS  
Field and Flower  
Piedmont, South Carolina

CALVIN COOK  
Arrowhead Dahlias  
Platteville, Colorado

JAMIE ROHDA  
Harvest Home  
Waverly, Nebraska

CONNIE DAM-BYL  
William Dam Seeds  
Dundas, Ontario

ALLISON SMITH  
Hunny Bunny Honey & Flowers  
Helotes, Texas

NANETTE DIETMEYER  
Fox Ridge Flowers  
Buckner, Kentucky

CHERYL WAGNER  
Wagner’s Homestead Farm  
Belleville, Michigan

DAVE DELBO  
Dave’s Flowers  
Elysburg, Pennsylvania

CHRIS WIEN  
Cornell University  
Ithaca, New York

JANET FOSS  
J. Foss Garden Flowers  
Chehalis, Washington

SUSAN WRIGHT  
Shady Grove Gardens  
Vilas, North Carolina

## 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.

### AMARANTHUS

#### **Amaranthus 'Elephant Head' (Genesis)**

**Good Qualities:** Great color (5); Large heads (3); Strong stems (2); This form was a nice addition to the amaranth lineup and worth growing again, despite some issues listed below; This plant is a real eye-catcher, it is definitely the focal point in an arrangement; Grows quickly from direct seeding at various times during the season, dense flower heads; Great for large floral work, easy to grow. **Problems:** Flower heads can quickly grow to be too large (4); 'Elephant Head' was a good crop overall, but we had some inconsistency in stem length and in plant vigor, making for a fairly non-uniform looking crop; Not popular with florists, stems tended to fall as it aged, may need to net, did not pinch; It will topple without support, one customer told me it looked like someone was "giving you finger", I guess you could see it that way, but the plant is very unique!; Chunky look; I don't have the right customer base.

**Similar Cultivars:** None

**Postharvest Recommendations:** Floralife, also drying; Like other amaranths, 'Elephant Head' had a wide harvest window and could be picked over a wide range of its bloom time (See also postharvest article in this issue for more information).

**Comments:** My customers are so-so on amaranth only because of the large size, some like it and some don't, the smaller heads are much more accepted; The sideshoots were much more usable, would be better if grown for fall arrangements, plants that were planted later were much shorter with smaller

heads making them more usable; Not a color or shape we need; With its dwarf plant habit, it is more of a bedding plant than cut flower type; I think it has its place, I am sure florists would love it!

### CELOSIA

#### **Celosia 'Bombay Green' (Kieft-Pro-Seeds)**

**Good Qualities:** Wonderful true green color (6); Amazing number of usable side shoots, to be honest the big honkin' central stem with the huge crest has very limited use with us, it is certainly neat and novel to gaze at, but, what to do with it, I cut them before they got crazy large and was very pleased with the nice useable, realistic size of the any sideshoots, comparing to 'Bombay Orange', it won hands down. (Orange had 0 sideshoots); Great germination; A nice color that worked well with the other flowers we were harvesting at the same time, 'Bombay Green' did not dry as well as the other celosias in the trial, it held its form well, but the colors became dingy and washed out; Consistent plant habit and flower shape, size.

**Problems:** Did not grow after it was transplanted (2); Too short (2); Crop failure, first time growing Bombay, had beautiful plants in the greenhouse and set flower at 3 inches tall? after reading on Bulletin Board, found it was not a good idea to top, planted a few out but they didn't get any height; Because of our cool climate, we often have challenges with good stem length on celosia and gomphrena, 'Bombay Green' was no exception and we had to use all of the stems in our mini/micro bouquets; Cannot hold in plug trays; Stems tended to fall as it aged, may need to net; In the field it can get brown spots from bugs.

**Similar Cultivars:** 'Spring Green'

**Postharvest Recommendations:** Cut when needed, do not keep around long after harvest, do not put in cooler.

**Comments:** Will be growing for sure



**'Bombay Green'**

2014, my favorite in the ASCFG trials this year; Cannot grow the Bombay series, always hold too long in plug tray; This was one of the few that we needed more plants, everyone loved the color; Love the color if I could get it tall enough, willing to give it another try; Bloom 1st of Sept from 6/11 transplant date, the best of the bunch this year; This velvety flower can be used at any size from 2 to 8 inches.

#### **Celosia 'Bombay Orange' (Kieft-Pro-Seed)**

**Good Qualities:** Great color for fall (6); Great germination; A nice color that worked well with the other flowers we were harvesting at the same time, 'Bombay Orange' also dried nicely, holding form and color; Consistent in plant habit, size, and shape.

**Problems:** Did not grow once transplanted (2); Was very disappointed with this one, I ordered seed from Ball prior to the seed packets arriving from the ASCFG, I grew both, the Ball seed and the trial seed and had the same results, I am interested in hearing how others did, or if it was just me...all the celosia was treated the same; Crop failure, first time growing Bombay, had beautiful plants in the greenhouse and set flower at 3 inches tall? After reading on Bulletin Board, found it was not a good idea to top, planted a few out but they didn't get any height; Because of our cool climate, we often have challenges with good

stem length on celosia and gomphrena, 'Bombay Orange' was no exception and we had to use all of the stems in our mini/micro bouquets; Cannot hold in plug trays; Stems tended to fall as it aged, may need to net; Inconsistent head size, grown in low tunnel.

**Similar Cultivars:** None noted by trialers.  
**Postharvest Recommendations:** None noted by trialers.

**Comments:** This was one of the few that we needed more plants, everyone loved the color and will definitely be on next year's list; Bloom mid Sept. from 6/11 transplant date; Colour is more of a burnt orange-red than clear orange; I hope I did not do anything to prevent this one from performing its best, I'm sure it's a good variety and certainly a great colour, could you pinch this perhaps?; I seem to always hold Bombays to long in plug trays and they never amount to anything for me.

### **Celosia 'Red Flame' (Genesis)**

**Good Qualities:** Great color (3); Good stems (2); A bright, shining color that worked well with the other flowers we were harvesting at the same time, 'Red Flame' also dried nicely, holding form and color; Heads 2-3 inches in low tunnel, bloom Sept.; Head size, strong stems; Dark foliage is a good contrast to the bright red flowers, multiple side stems for extended harvest.

**Problems:** Flower shape and size are not consistent (2); Need support; Because of our cool climate, we often have challenges with good stem length on celosia and gomphrena, 'Red Flame' was no exception, but we still liked this cultivar; Tended to fall over as plant aged, stems were not as strong as other varieties, maybe should have cut stems sooner.

**Similar Cultivars:** Higiyoko red stem; 'Kurume New Scarlet'.

**Postharvest Recommendations:** Floralife (See also postharvest article in this issue for more information).

**Comments:** Added stem color to bouquets; Transplanted 6/11 and 6/17 now harvesting on 10/2 in low tunnel; I mixed this with other colors of celosia

or in mixed bouquets, it seemed to sell better that way.

### **DIANTHUS**

#### **Dianthus 'Sweet Black Cherry' (PanAmerican)**

**Good Qualities:** Striking color (13); Strong stems (4); None (2); Large flower head (2); Productive (2); Well-liked by our customers and by our bouquet-making crew; Nice to see new colors coming along; Good, lasting flower, easy to germinate, easy to grow and had a fairly long harvest window; Long straight stems, beautiful dark red combines well with other colours, buds are useable as filler; Customers liked it, productive; Nice clean blooms, like the colour especially in the fall.

**Problems:** Stems were too short (5); I wish they were the same length as the Amazon Neon series; Stems were weak as compared to 'Sweet White', it might be good for fall, but it didn't sell for us in early season, we didn't sell any the first three weeks we had it available, yet I thought it was a wonderful color, the bloom heads are much smaller than white; Although people commented on the nice color they rarely wanted it in their bouquets, almost too dark of a color; I can see where some people might like more stem length, this would be helpful but not at the expense of a weak stem.

**Similar Cultivars:** Other Sweets.

**Postharvest Recommendations:** Good stripping of foliage to keep the water clean longer, especially if you are not using any water treatments; Chlorine; Always use Floralife in the water when first cut and after bouquets are made (See also postharvest article in this issue for more information).

**Comments:** Friends started these for me in their greenhouse, seeded 2/2, transplanted to my garden 4/15, first cuts 6/7; Would be a good crop for tunnels; I liked the color but it was a hard sell to retail florist and event people; Rainy spring and summer led to rotting in the field; 5/14 transplant - bloomed 6/15, 6/13 transplant - bloomed 7/20, still blooming (10/2) in low tunnel - no frost yet; Liked this one a lot; People visiting our trials loved how dark the colour was: we call it "old Hollywood glamour red"; Stems were a little short, probably our hot weather, planted 5/20 with 6-inch spacing; I sowed half early and the rest later, I found that when the first sowing is blooming, there are so many other



**'Sweet Black Cherry'**

flowers to choose from, I don't always cut every stem, I like to cut it later in the season as it is more of a novelty; I cut and sold all of my late-sown Sweet series and will definitely grow again if seed becomes available.

## EGGPLANT

### Eggplant 'Pumpkin on a Stick' (Genesis)

**Good Qualities:** Persimmon orange color was very striking (5); Outstanding germination (2); Great for fall arrangements (2); Great postharvest life (2); Very easy to grow, these stems are eye-catching and everyone wants to know what the plant is, the sturdy purple stems are again, eye-catching; Unique fruit, fruit dry well; Stems could be harvested when the fruits were not yet colored, thus providing a different look, when fully mature, the fruit color contrasted to the black stems; Decorative pumpkins for the fall season; Nice size fruits; Unique size and shape, seasonal fall item; Numerous fruits.

**Problems:** The stems have thorns! (5); The leaves were ravaged by some insect, but you cut them off anyway to expose the little pumpkins on the stem; Fruit start only couple inches off ground, have to cut off some bottom fruit so you have a stem, foliage is ugly, should be removed, stems super heavy, need a good vase; We grew them in bulb crates, initially in the greenhouse and then outdoors when our greenhouse planting got infested with aphids, they seem to really attract the aphids, but once we moved them outside, delivered a single soap spraying, the natural predators cleaned up the plants fairly quickly, fortunately, this took place early in their life cycle and by the time we were harvesting, the early damage was no longer evident; Potato bugs; Some stems produced nice clusters of fruit while others only had 1-3 per stem, main stem is nice and tall and then the lateral branches are shorter and don't mature at the same rate as the

first stem, I cut them while the shorter stems were on the green side hoping that they may color up, I didn't want the tall stem to go bad; No problems.

**Similar Cultivars:** None.

**Postharvest Recommendations:** The fruit dry well so the stems can be put in a vase with no water and be just fine; Water not necessary; Floralife; Remove leaves (See also postharvest article in this issue for more information).

**Comments:** I love this plant and will grow it next season, my customers love it (except for the thorns); Farmers' market customers loved it! So unique, everyone

I love 'Pumpkin on a Stick' and will grow it next season, my customers love it (except for the thorns); Farmers' market customers loved it! So unique, everyone had to try!

had to try!; Leaves removed before sale, dry summer kept plants shorter than previous years; Florist don't know what to do with this, fall season just starting so no sales retail as of yet, just lookers, just cuttable 10/2 long season for the return in cool summer.

## IBERIS

### Iberis 'Yael' (Genesis)

**Good Qualities:** This is a bedding plant due to the short stems, it flowers for months, when we had a dry spell in August and I didn't water them as often as I should have, the flowers died back, very nice bright white that was useful as a filler and contrast to the rest of what we grow; Nice bloom.

**Problems:** Too short to be a cut flower (3); We harvested whole plants, stripped some of the base and then used the whole plant as a filler/base for small bouquets,

a lot of space for not a lot of yield; Never grew well, started flowering in pack, never made it to the field.

**Similar Cultivars:** None listed by trialers.

**Postharvest Recommendations:** None listed by trialers.

**Comments:** It bloomed a lot longer than my other candytuft, I was surprised it lasted as long as it did, I'm hoping it is a perennial and will return next season!; Nice color and shape, too short, 6/18 bloom from 5/15 transplant date; We had a very rainy spring and summer, most died in the field, and those that did not die were too short to cut.

## LARKSPUR

### Larkspur 'Cannes White' (Takii Seed)

**Good Qualities:** Sturdy (4); Wonderful color (2); Size of head, full head of flowers; Vigorous plant; Good germination; Quick to germinate, full look; Good stem quality and fairly consistent stem length across the entire planting.

**Problems:** None; Bloomed same time as fall-sown direct-seeded larkspur; Browns quicker than most; No major problems that

are not already common to larkspur, we had a little bit of early damping off and some plants that bolted, even when their neighbors were perfectly happy.

**Similar Cultivars:** 'Other larkspurs; 'Qis White'; 'Sublime White'.

**Postharvest Recommendations:** Used Floralife; Just used plain water; Here again, good stripping is important to maintain clean water when not using water treatments.

**Comments:** Nice addition to bouquets; Stems were a little short in our hot weather, direct seeded 3/23; Much easier to grow larkspur by direct seeding in the fall.

## LISIANTHUS

### Lisianthus 'Arena II Blue Flash' (Takii Seed)

**Good Qualities:** Strong stems (2); Vigorous plants, great growth habit; Tough, drought tolerant, beautiful color,

multiple blooms, still have some in the field, withstood a flood, not one pest; Farmers' market customers liked the color, the friends who started the seeds in their greenhouse were pleased with the ease and said they can now rethink starting eustoma from seed rather than buying plugs; Beautiful colors; Tall, early, attractive blue streaks on white background; All cultivars were good in color and sturdy stems, size of flowers were good and many blossoms per stem. **Problems:** Color looks washed out (2); Color was not as good as 'ABC Misty Blue', color faded in our hot weather, once the weather cooled, color was better; Usually last to sell to florists; Needs support (floral netting) and probably does much better in a hoop house (which I don't have); Difficulty in germination, seeds arrived late for this season; None; Poor germination compared to other varieties; The pinks tended to take on a little lavender color at times, it wasn't anything that hurt sales.

**Similar Cultivars:** 'ABC Misty Blue'

**Postharvest Recommendations:** Floralife (See also postharvest article in this issue for more information).

**Comments:** Planted in high tunnel 5/12 6-inch spacing, germination excellent—90% plus; Started in greenhouse 2/2, transplanted 6/4, grown outside in partial shade, still cutting 10/21, customers love lisianthus, I don't care for them; I love lisianthus but I have poor germination results when I grow from seeds since I do not have a greenhouse, the seeds arrived late for this season's germination and harvest, the few plants I did grow were short and had one stem per plant, I will plant them in my hoop house and see how they do next season; Cool season too short to allow second flush to mature in field, only partly harvested in tunnel; We had a cool, wet spring and early summer and we had the best lisianthus we have ever had in the field; Not really enough to compare well, planted 6/13, slow grower, bloomed 9/28 in cool summer low tunnel; Eustoma is always well

accepted at the market, people love the colors and the lasting quality of the plant and cut flowers; Chris Wien at Cornell noted 16-inch stems in the field and 22-inch stems in the high tunnel.

### **Lisianthus 'Arena II Light Pink' (Takii Seed)**

**Good Qualities:** Pretty yellow (2); RUFFLED! the petals are adorably ruffled and the color is a really nice soft yellow that goes well with white and ivory, excellent for wedding work, seed germinated relatively "easy" for lisianthus, still spotty but at least 50% without any fuss; The frillier blossom edge was lovely.

**Problems:** Poor germination (2); Mine weren't very productive or tall, but I think that is due to a very late start; The off-white "yellow" color was muddy; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** Germination was extremely poor and only one seedling made it through summer, they were planted 2/20, as of 9/18 they are approximately 6 inches in height and no sign of budding; Got the seed too late to make a real go of this since lisianthus are so slow to germinate and grow, I would take that into consideration when weighing my comments, I was actually impressed with how well it did considering the late start; All but six plants succumbed to a late killing frost, we had 80 degree days that sort of fried them, then a couple of killing frosts in early May.

### **Lisianthus 'Arena III Baby Pink' (Takii Seed)**

**Good Qualities:** Excellent pink color (4); It wasn't the typical rosey pink of most lissis, very nice for wedding work; Super vigorous plants, great growth habit, great stems and foliage;



**'Arena II Blue Flash'**



**'Arena II Light Pink'**

Tall, productive, early; Strong stems; A visitor from California who does arrangements for events commented on the dark centers as something he hadn't seen before, I liked this in arrangements with dark burgundy dahlias, the friends who started the seeds in their greenhouse were pleased with the ease and said they can now rethink starting eustoma from seed rather than buying plugs; Great stems; Better for weddings than 'Arena Light Pink'; All cultivars were good in color and sturdy stems, size of flowers were good and many blossoms per stem. **Problems:** None (2); Very late, very short, all three lissi sown, planted and

grown the same, this variety was much shorter, it is blooming right now and I consider it late.... mid October, grown in field with no irrigation, planted through biodegradable black plastic, sown March 20, planted in field June 1, first stems harvested October 4, favorite thing about this one is colour and although short it was very healthy and usable in small bouquets; Color very soft, in the hot weather color almost had brown look, once weather cooled color was much better; Needs support (floral netting) and probably does much better in a hoop house (which I don't have); Difficulty in germination, seeds arrived late for this season; The pinks tended to take on a little lavender color at times, it wasn't anything that hurt sales.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife (See also postharvest article in this issue for more information).



**Pepper 1-159252**

**Comments:** I really liked the colour of this one, I would grow again if Ball Tagawa offers; Planted high tunnel 5/12 at 6-inch spacing, germination was 90% plus, color so different should have its place in floral work; Although rated as a class 3, of same maturity as its sister lines rated 2; Hard to tell lisianthus varieties apart, most look similar; Started in greenhouse 2/2, transplanted 6/4, grown outside in partial shade, still cutting 10/21, customers love lisianthus, I don't care for them; I love lisianthus but I have poor germination results when I grow from seeds since I do not have a greenhouse, the seeds arrived late for this season's germination and harvest, the few plants I did grow were short and had one stem per plant, I will plant them in my hoop house and see how they do next season; We had a cool, wet spring and early summer and we had the best lisianthus we have ever had in the field; Creamy pink, late for a lisianthus late Sept, sowed 1/21, transplanted 6/13, bloom 9/27; Eustoma is always well accepted at the market, people love the colors and the lasting quality of the plant and cut flowers; Chris Wien at Cornell noted 18-inch stems in the field and 21-inch stems in the high tunnel

## PEPPER

### **Pepper 1-159252 (Cornell University)**

*See Cornell-copia article for more information on these peppers.*

**Good Qualities:** Tight clusters of peppers all along the stem, holds peppers well; These peppers are cherry-sized and are turning from yellow to orange as they mature, great addition to an arrangement!; High yield of long stems, attractive yellow globe fruits, one inch diameter, moderately attractive as dry stems; Peppers were upright and rounded in growth, had an interesting crown-like shape on top of the pepper.

**Problems:** Stems short, but usable; None that I have encountered; Slight drop of maturing fruits; Aphids were attracted to this pepper in the greenhouse, once treated and set in the field they were fine, however, prior to harvest we found blister beetles in abundance.

**Similar Cultivars:** None.

**Postharvest Recommendations:** Remove leaves as they wilt and use plain water, we do not use preservative because we put these in mixed bouquets and told our customers they could enjoy the bouquet and then eat the peppers if they wanted to (See also postharvest article in this issue for more information).

**Comments:** Plants wilted after a week in water, hydrator not effective, worth growing again; We did not receive the seed until March 26, however, they were germinated April 8 with a 75% germination rate, they stayed in the cell packs until July 1, once planted they took off, plant formed one main stalk then branched, the branched sections were not very long, nor did they have many peppers in the cluster.

### **Pepper 10-441525 (Cornell University)**

*See Cornell-copia article for more information on these peppers.*

**Good Qualities:** Beautiful green leaves with strong stems, multiple peppers turning red after cut; Nice clusters of peppers, good balance of colors; Bean-sized peppers are turning orange, this is a keeper, the stems are strong and it really adds to an arrangement in the fall; Tall, productive, thin upright yellow fruits, holds up in water without wilting; Pretty pale yellow color initially then changing as it aged.

**Problems:** Rabbits loved them; None that I see; Not attractive when dried, fruits discolor; Aphids in the greenhouse as seedlings, blister beetles at harvest.

**Similar Cultivars:** None.

**Postharvest Recommendations:** Lots of water and indirect light; Remove leaves first, plain water (See also postharvest article in this issue for more information).

**Comments:** At least 2 weeks with leaves on, in water, relatively late in our cool growing season this year; Although the overall stem length was 16 inches, we cut just above the branching and got only about 8 inches of length which was fine for short bouquets.

**Pepper 13-441552 (Cornell University)**

See *Cornell-copia* article for more information on these peppers.

**Good Qualities:** Beautiful green leaves with strong stems and multiple peppers turning red even after cut; Lime-colored cherry-sized peppers which turn orange as they age, long-lasting, easy to grow, look super in arrangements; Tall productive plant with many green fruits, turning red, stems moderately attractive when dried; Sorry, NONE, the pepper hung downward, looked like miniature bell peppers, not a good ornamental at all.

**Problems:** Rabbits love them; The peppers were too spread out on the stems for a good impact, the stems of this cultivar were weak; None that I could see, I got a late start getting these seeds into the ground so that they are now coming into good color (mid-October), this is not a problem though; Slow and late in this cool season; Aphids in the seedling stage.

**Similar Cultivars:** None.

**Postharvest Recommendations:** Remove leaves, plain water (See also postharvest article in this issue for more information).

**Comments:** There was very little transitional color on this cultivar, the peppers were either red or green; 1 week before leaves started to wilt, worth another look.

**Pepper 16-441575 (Cornell University)**

See *Cornell-copia* article for more information on these peppers.

**Good Qualities:** These peppers are bean shaped and sized, they are turning a light purple, they have strong stems and should look great in arrangements; Lots of different colors on this cultivar, purple, yellow, orange, and red, the peppers were nicely spaced on the stems, and the stems were very sturdy; Tall productive plant with multi-colored fruits, attractive.

**Problems:** None (2); Plants did not mature beyond 4-5 inches; Too short, peppers were upright, but not in large clusters, I was not impressed.

**Similar Cultivars:** None.

**Postharvest Recommendations:** Remove

leaves, plain water (See also postharvest article in this issue for more information).

**Comments:** This cultivar was our favorite of the ones we trialed; 1 week before leaves wilt in water, hydrator did not improve vase life, worth growing again; This pepper was too short to get any cuts above the fork, therefore, to get a cut we had to cut the whole plant.

**Pepper 22-441530-2 (Cornell University)**

See *Cornell-copia* article for more information on these peppers.

**Good Qualities:** These peppers are jalapeno shaped and colored. They are gradually turning a bright orange. They have strong stems and look great in fall arrangements; Tall and productive, showy plant with yellow round fruits.

**Problems:** None that I have encountered; Did not have good germination with this cultivar, the peppers were too spaced out on the stem for a good impact; Oldest fruits tend to drop near maturity of the plant.

**Similar Cultivars:** None.

**Postharvest Recommendations:** None listed by trialers (See also postharvest article in this issue for more information).

**Comments:** Leaves wilt in less than a week in water.

**SNAPDRAGON****Snapdragon 'Chantilly Velvet' (Takii Seed)**

**Good Qualities:** Awesome color (8); Strong stems (4); Very prolific (2): Good stems and growth habit; early, performed best in cool fall conditions; When pinched, the basal branching was well spread, allowing for easy harvest, also, not all stems were ready at once, but picked over a 15-18 day period, which helps when

**Pepper 16-441575**

you cannot do continuous succession plantings; Multiple usable stems for bouquet work after cutting initial stem, nice open florets, the flowers open to give it a unique look for a snapdragon, it blooms in the spring and the fall; Good for fall color, rusty faded red; Size of blossom; Beautiful open-faced florets, florets are large and well-spaced on the stem.

**Problems:** Didn't like the color in our hot weather, not as vigorous as 'Chantilly Purple', not as many stems per plant; Being a class 1-2, did not produce long stems and racemes in midsummer; Like other snapdragons, these plants eventually succumbed to rust; Did not seem to grow as well outside as it did in hoophouse, definitely needs netting for secondary growth; Not very productive; Needs support (floral netting); None that I encountered; Spindly and sparse, had a good flush of flowers in the beginning and then they weren't as full as others I've grown; Aphids.

**Similar Cultivars:** Our customers really like the Chantilly form and 'Velvet' was a good addition to the lineup; Other Chantillys, not as robust as others

**Postharvest Recommendations:** Floralife (See also postharvest article in this issue for more information).

**Comments:** Harvested 3 crops, 2nd and



**'Purple Twist'**

3rd were shorter, but still good for bouquet work, transplanted 4/15 high tunnel at 6-inch spacing; Started in greenhouse 2/2, transplanted 4/15, first cuts 5/31, still cutting 10/18; Sowed 1/18, transplanted 5/15, bloom 7/20, still blooming some 10/2 in low tunnel, red with orange tone; The colour changes when the temperatures get cooler, from bright to dark red, this is a good addition to the Chantilly series; Greenhouse grown; Chris Wien at Cornell harvested 33 stems, averaging 17 inches long when planted in the spring in the field and 13 stems, averaging 20 inches long from a fall high tunnel crop.

**Snapdragon 'Purple Twist' (PanAmerican)**

**Good Qualities:** Very unusual color pattern! (9); Productive (2); Strong stems (2); A local florist was in awe, worked well in arrangements; Good growth habit, stems; Early; Initially,

we had mixed response to the spotted/marbled appearance of 'Purple Twist', but I think the unique form really grew on our students and customers, very unlike other snaps we have grown, with standout qualities that make it well worth growing again; Multiple usable stems for bouquet work after cutting initial stem, nice open florets; It was unusual; Blooms in the spring and again in the fall; Quick to germinate, nice color except the speckled ones; Novelty striping!

**Problems:** Needs support (floral netting) (3); I didn't care for this one, I grew the same one from Ball Seed last year and it seemed to have a lot more colour than this one had, to be honest, I cut very little, there are lots of other nice snaps I would rather have, the blooms were not big or strong; None; Stems and racemes short, especially in heat of summer; Like other snapdragons, these plants eventually succumbed to rust; Aphids; Did not seem to grow as well outside as it did in hoophouse; Hard to use in a bouquet, short, not very productive, short vase life; It got rust awfully early in the season, which spread to all our snaps ending the season sooner than I hoped; too short in low tunnel; Plant grew "squirrely" and out of shape, didn't get much harvest all season, cut back plants but still didn't do much.

**Similar Cultivars:** None.

**Postharvest Recommendations:** Floralife in water (See also postharvest article in this issue for more information).

**Comments:** I will not grow this one unless the 'in' colour palette requires!; Harvested 3 crops, 2nd and 3rd shorter, but usable in bouquet work, transplanted in high tunnel 4/15 at 6-inch spacing; Flower color pattern appears to vary with temperature: in hot conditions, florets have a pink base color with purple speckles; in cool weather, purple streaks are formed and may even broaden to make the whole floret purple; Greenhouse grown; Started in greenhouse 2/2, transplanted 4/15, first cuts 5/31, still cutting 10/18; I really appreciated getting to trial this snap and I loved the name; Good-sized flowers on the stalks; This started out as a really interesting variety, white with lots of purple strips as the season progressed the purple strips went away and the flowers were purple flecked instead, by mid July, there was no purple coloration at all; Some solid purple in the mix, looked diseased; The striping pattern changes with the temperature—it looks completely different in the fall than summer, both are fantastic! adds a whimsical element to bouquets; Chris Wien at Cornell harvested 16 stems, averaging 32 inches long when planted in the spring in the field and 20 stems, averaging 10 inches long from a fall high tunnel crop.

**Snapdragon 'Trumpet Pink' (PanAmerican)**

**Good Qualities:** Very pretty soft pink (10); Good strong stems (6); Used every stem; Vigorous; harvested 3 crops. 2nd and 3rd were shorter, but still good for market bouquets, soft pink color was great to work with; Productive, early; Fairly vigorous plants and good stem strength but otherwise this was not a big

standout; Pink color always sells in spring; Multiple usable stems for bouquet work after cutting initial stem, nice open florets; Popular for weddings, blooms in the spring and again in the fall; Quick to germinate; Constant bloom, liked that it mixed well with lots of colors; Love the open-faced florets too, spikes are filled well, evenly spaced.

**Problems:** Needs support (floral netting) (3); Rust (2); Not a problem, but did not come back like Opus; None; Probably a class 1-2; stems and racemes short in warm summer conditions; Aphids; Did not seem to grow as well outside as it did in hoop house; Not very productive; Most died early because of our wet spring; Short and spindly in the low tunnel, should do better in a high tunnel.

**Similar Cultivars:** ‘Chantilly Pink’ (2); Similar to Chantillys with better growth habits; Chantilly series.

**Postharvest Recommendations:** Floralife in water (See also postharvest article in this issue for more information).

**Comments:** Soft pink color (3); I used every stem of this one which surprised me, because the butterfly snap is not usually as popular cut, first 4 stems per plant July 4, early harvest for

us, sowed greenhouse March 28, grew in 50 cell trays, pinch all snaps, transplanted to field June 1; We loved this one; Best suited to fall plantings in our environment; I really wish breeders would focus on true resistance to rust for all new snapdragon cultivars, colors, forms, stem length are all good across the range, but organic growers really need rust resistance; Greenhouse grown; Nice fragrance, worked well in arrangements with other flowers I grow to sell at farmers’ market, started in greenhouse 2/2, transplanted 4/15, first cuts 5/31, still cutting 10/18. Customers loved this snap, they called it a salmon pink, it was a fun snap to grow; Good-sized flowers on the stalks; Sowed 1/18, planted out 5/15 bloom 7/10 low tunnel added mid-summer, still blooming 10/2; Very well-liked by customers; We did not support the snaps: they fell down in the wind and started to form multiple side shoots, which were shorter but more abundant; Chris Wien at Cornell harvested 33 stems, averaging 17 inches long when planted in the spring in the field and 11 stems, averaging 21 inches long from a fall high tunnel crop.

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**2013 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 <sup>1</sup>	Repeat again rating <sup>1</sup>	Ease of cultivation rating <sup>1</sup>	Average postharvest life (days)
Amaranthus 'Elephant Head' Genesis Seed	<b>2.7</b> 1-10	<b>23.2</b> 12-48	<b>2.9</b> 2-4	<b>2.6</b> 2-5	<b>4.6</b> 4-5	<b>10.3</b> 7-14
Celosia 'Bombay Green' Genesis Seed	<b>1.5</b> 1-9	<b>17.2</b> 6-34	<b>4.0</b> 3-5	<b>3.6</b> 2-5	<b>3.9</b> 3-5	<b>10.3</b> 6-14
Celosia 'Bombay Orange' Kieft-Pro-Seed	<b>0.6</b> 1-8	<b>19.0</b> 6-34	<b>3.3</b> 3-4	<b>3.2</b> 2-5	<b>3.4</b> 3-4	<b>12.0</b> 10-14
Celosia 'Flame Red' Kieft-Pro-Seed	<b>6.8</b> 2-18	<b>19.3</b> 7-21	<b>4.2</b> 1-5	<b>4.0</b> 1-5	<b>4.3</b> 1-5	<b>11.8</b> 8-14
Dianthus 'Sweet Black Cherry' PanAmerican	<b>7.5</b> 2-18	<b>13.7</b> 10-24	<b>4.0</b> 3-5	<b>4.0</b> 3-5	<b>4.4</b> 3-5	<b>9.8</b> 7-15
Eggplant 'Pumpkin on a Stick' Genesis	<b>2.6</b> 1-6	<b>22.3</b> 16-36	<b>4.5</b> 3-5	<b>4.5</b> 3-5	<b>4.5</b> 4-5	<b>30.8</b> 28-37
Iberis 'Yael' Genesis	<b>1.0</b> 1	<b>9.0</b> 8-12	<b>1.0</b> 1	<b>1.5</b> 1-3	<b>3.0</b> 2-4	<b>9.0</b> 7-10
Larkspur 'Cannes White' Takii Seed	<b>2.6</b> 1-6	<b>19.0</b> 12-30	<b>3.8</b> 3-5	<b>4.2</b> 4-5	<b>4.0</b> 3-5	<b>6.5</b> 5-8
Lisianthus 'Arena II Blue Flash' Takii Seed	<b>2.3</b> 1-3	<b>13.4</b> 8-30	<b>3.9</b> 3-4	<b>3.4</b> 1-5	<b>3.4</b> 1-4	<b>13.3</b> 8-21
Lisianthus 'Arena II Light Pink' Takii Seed	<b>1.8</b> 1-6	<b>14.8</b> 12-32	<b>3.7</b> 3-5	<b>3.4</b> 1-5	<b>3.5</b> 2-5	<b>10.6</b> 8-14
Lisianthus 'Arena III Baby Pink' Takii Seed	<b>2.1</b> 1-6	<b>17.2</b> 10-24	<b>4.1</b> 2-5	<b>4.4</b> 2-5	<b>4.7</b> 2-5	<b>12.4</b> 9-21
Pepper 51-59252 Cornell University	<b>7.5</b> 2-17	<b>21.5</b> 12-38	<b>3.8</b> 2-5	<b>3.5</b> 1-5	<b>4.8</b> 4-5	<b>11.5</b> 7-14
Pepper 10-441525 Cornell University	<b>7.8</b> 2-22	<b>19.3</b> 8-40	<b>3.8</b> 1-5	<b>3.8</b> 2-5	<b>4.6</b> 4-5	<b>15.3</b> 14-21

<sup>1</sup> 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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Pepper 13-441552 Cornell University	8.3 2-15	21.6 10-41	3.4 1-5	3.4 1-5	4.4 3-5	14.2 7-21
Pepper 16-441575 Cornell University	7.3 1-22	21.0 12-35	3.4 1-5	3.2 1-5	4.0 1-5	12.8 7-16
Pepper 22-441530-2 Cornell University	6.6 2-12	24.6 18-36	3.3 1-5	4.0 3-5	4.5 4-5	11.0 7-14
Snapdragon 'Chantilly Velvet' Takii Seed	7.5 1-15	18.4 12-36	4.0 3-5	4.0 3-5	4.2 4-5	6.7 5-7
Snapdragon 'Purple Twist' PanAmerican	6.9 1-15	19.7 12-36	4.1 3-5	3.5 2-5	4.1 3-5	7.4 4-14
Snapdragon 'Trumpet Pink' PanAmerican	7.1 1-15	18.5 12-36	4.1 3-5	4.2 3-5	4.2 3-5	7.9 5-14

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