

The background of the cover is a photograph of two pink carnations standing next to a yellow measuring tape on a light-colored concrete surface. The measuring tape is positioned vertically on the left side, with its markings visible. The carnations are positioned to the right of the tape, with their stems extending downwards. The title '2017 ASCFG Seed Trial Report' is overlaid on a yellow horizontal band across the middle of the image.

# 2017 ASCFG Seed Trial Report

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Sunflowers are a mainstay of the specialty cut flower industry and a common species in our trials over the years. We evaluated three groundbreaking cultivars this year: ‘ProCut White Lite’ and ‘ProCut White Nite’ from NuFlowers, and ‘Sunfinity’ from Syngenta/Goldsmith.

Trialers couldn’t say enough great things about ProCut’s ‘White Lite’ and ‘White Nite’, including “Incredible! My favorite cultivar in the whole trial!”, “LOVE LOVE LOVE the color.” and “Customers VERY excited about this variety, asking repeatedly if we are growing this next year.” This is not the first year we have had white or near-white cultivars in the trials; ‘Jade’ comes to mind, for example. However, this is the first time we had near-white flowers on a commercially mainstream plant that flowers quickly from seed, has long and strong stems, and good postharvest life. ‘White Nite’ has dark brown centers and ‘White Lite’ has yellow centers. It should be noted for the record that while the cultivar names include the word “white”, these flowers are not white. Both have very pale yellow or creamy petals. Only time will tell if breeders are able to produce a sunflower with true white petals.

It is not to say that Trialers didn’t report some issues with ‘White Lite’ and ‘White Nite’: weak necks, multiple heads on a stem, and more insect damage than on other sunflowers cultivars were most often mentioned. However, on the whole, Trialers and their customers clearly thought ‘White Lite’ and ‘White Nite’ were winners.

‘Sunfinity’ represents a major breakthrough in cut sunflower breeding: a cut-and-come-again sunflower. While we already have branching sunflower cultivars—they produce at most two good harvests—the first is when the main stem is cut, and the second is when the side shoots are harvested. ‘Sunfinity’ is completely different as the plant structure is more like that of a zinnia, allowing for a long harvest period. However, unlike zinnias, production from ‘Sunfinity’ tended to cycle on and off. Here at NC State we

cut hard, and it would take the plants some time to come into production again. Also, several Trialers mentioned that ‘Sunfinity’ had “season-long” production, which is what the breeder’s literature had also said. It should be noted that here in North Carolina, plants were productive a long time but not season long, and two or three plantings a month apart would provide continuous flowers. Growers in northern or cool areas were able to harvest all summer.

How did ‘Sunfinity’ perform as a cut flower? Trialers recorded 11 stems per plant, with two participants reporting highs of 25 and 33 stems per plant. The length was much shorter than most sunflowers, averaging 19 inches. However, at least one grower harvested some stems 43 inches long. At NCSU we compared pinched and unpinched production, and found that pinched plants produced 33 stems that averaged 25 inches long, and unpinched plants produced 29 stems that averaged 23 inches.

‘Sunfinity’ flowers were the classic sunflower color—yellow-orange petals and dark brown centers. Both the overall flower and the centers tend to be smaller than traditional sunflowers. Trialers reported an average vase life of about 8 days, which was close to the nine-day vase life we recorded in our postharvest experiments. At least one noted that some of the flowers were not pollenless, which the company confirmed. They indicated that additional breeding is ongoing and true pollenless cultivars are on the way. Trialers also mentioned that heads were a bit floppy.

In summary, ‘Sunfinity’ will be a great addition to those who grow sunflowers for bouquets. Southern growers may want to make two or three plantings to ensure stems are continuously available. Unfortunately, the seed is quite expensive, which will limit interest from cut flower growers. The company has indicated that ‘Sunfinity’ is the first cultivar to be released and subsequent selections are on the way. We hope the seed price will also be better suited to cut flower growers.



‘White Nite’



‘White Lite’



‘Sunfinity’





'ProCut Bicolor DMR'

Besides the three cultivars already discussed, four other commercially available sunflowers were in the Trial, and while not groundbreaking, both 'Vincent's Choice Deep Orange DMR' (Sakata) and 'ProCut Orange Excel' (NuFlowers) scored very well. Both had the classic dark centers and orange petals that many customers tend to prefer.

The two bicolors, 'Helios Flame' (Harris Seed) and 'ProCut Bicolor DMR' (NuFlowers) were very well received. Trialers mentioned they were easy to grow, fast to flower, and relatively problem free. At least two noted that 'Helios Flame' produced a decent second crop after the first harvest. This seemed to happen mainly in cooler climates. However, bicolors are not as popular with customers, which probably lowered the scores.

In addition to the Trial plants, at NCSU we tested five new sunflower selections from Genesis Seed. Unfortunately, they did not have enough seed for the entire Trial program. All five numbered selections, EH16-10, EH16-13, EH16-21, EH16-21L, and EH16-30L performed well, producing one stem per plant, and were easy to grow. Stem length varied from 53.5 inches for the tallest cultivar, EH16-30L, to 30.5 inches for EH16-10. The other three cultivars were intermediate: EH16-13 (34 inches), EH16-21 (44.5 inches), and EH16-21L (43 inches). As

reported in the postharvest article, the vase life of the selections ranged from 11 to 15 days on average.

Rich textures are in style; fortunately this year's Trial included a winning plant for adding an extra flair to bouquets and arrangements. 'Mahogany Splendor' hibiscus (*Hibiscus acetosella*) (Harris Seed) is cut for its rich burgundy foliage that resembles lush, large Japanese maple leaves. Plants were very productive, producing an average of 20 stems per plant, which were 25 inches long. At least one grower was able to cut stems up to four feet long, and another was able to harvest up to 100 stems from one plant. 'Mahogany Splendor' likes the heat and grows most vigorously in warm regions, but even cool climate growers were able to harvest stems. However, they generally cut 3 to 20 stems, versus over more than 50 per plant as seen in zones 7 and 8. Not only are plants heat resistant, they're also drought resistant and hardy in Zones 8 and 9, for those who might want to try to overwinter them.

Postharvest life for 'Mahogany Splendor' averaged 9 days, with several growers getting more than two weeks. However, many noted hydration issues. See the comments sections for recommendations for handling 'Mahogany Splendor', most of which say to harvest in the morning or afternoon, and to use a commercial hydration solution. Note that these recommendations match our testing (see postharvest article in this issue), which found that using a commercial hydrator increased vase life to 18 days from 13 to 15 days when a hydrator was not used.



EH16-30L



Marigolds

Marigolds, marigolds, marigolds. This once uncommon cut flower crop has become a mainstay for many ASCFG members. While there were a few comments about the foliage odor, growers seem to have adapted (or resigned themselves) to it. As the odor is most pronounced during harvest and processing, customers seem to either not notice or not mind it. We had five cultivars from AmeriSeed: '888 Deep Gold', 'Falcon Yellow', 'Jedi Orange', 'Oriental Deep Gold', and 'Oriental Gold'. The overall favorite was 'Jedi Orange'; Trialers noted the color ("fabulous pumpkin orange"), large flowers, and long side shoots. Trialers reported harvesting an average of 9 stems per plant, which were around 20 inches long. Actually, all of the marigolds did quite well, yielding a similar number and length of stems. Vase life ranged from 7 to 20 days, and averaged 11 to 12.5 days for all cultivars.

This year Syngenta submitted four first-year flowering perennials: *Aquilegia* Kirigami mix, *Campanula* 'Campbell Blue', *Papaver* Pulchinella mix, and *Penstemon* 'Arabesque Appleblossom'. The campanula and penstemon flowered most reliably, while the columbine and poppy did not bloom for a number of Trialers. The campanula and penstemon scored the highest for their long stems with bell-shaped flowers, which were a nice shade of

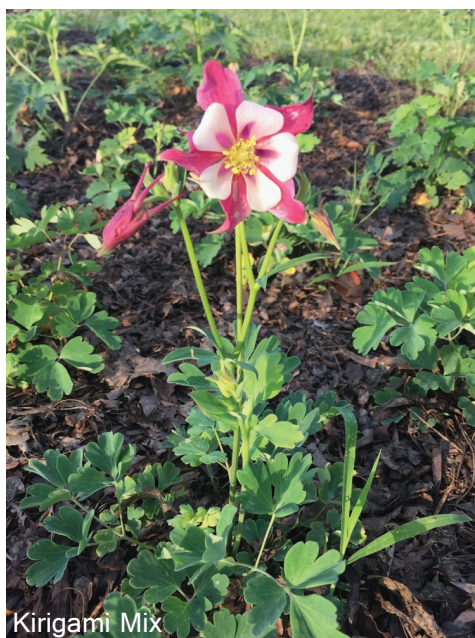


purplish blue for the campanula, and white with blush pink edge for the penstemon. The bellflower produced an average of 3 stems per plant, which were about 18 inches long, although at least one grower got 28- to 36-inch stems. The penstemon produced an average of 4 stems/plant that were about 14 inches long. As much as Trialers loved the color of the penstemon, the short vase life of only 3 to 7 days reduced enthusiasm for the cultivar. Growers of the campanula reported a vase life of 5 to 12 days.

All four of the Sweet dianthus entries, 'Magenta Bicolor', 'Pink', 'Pink Deep Maxine', and 'Pink Magic', from Ball/PanAmerican were fairly well matched, producing an average of 6 stems per plant. Stem length tended to be on the short side at 14 to 16 inches, although one grower reported 24- to 30-inch stems. Vase life ranged from 7 to 14 days with a nice average of 10 days. 'Magenta Bicolor' was the favorite color of the four cultivars, although each one had its fans.

Sakata's three lisianthus had unusual colors: Lisianthus 'Rosanne 1 Black Pearl', 'Rosanne 1 Green', and 'Rosanne 2 Deep Brown'. 'Black Pearl' was a rich, deep purple, and 'Deep Brown' was more mauve than anything else. Blessedly, 'Green' was well named for its bright flowers. All produced 2 to 3 stems per plant that were 17 to 18 inches long. As with most lissies, the vase life was a wonderful 13 to 14 days, with some reporting three weeks.

The ASCFG Seed Trial format of distributing seed in the winter for spring planting generally does not lend itself to testing of ornamental cabbages and kale, which need a long cool period to perform best. Having said that, we had two kale cultivars from Harris Seed, 'Crane Feather Queen' and 'Scarlet', and both did quite well with growers across a broad range of climatic zones. 'Crane Feather Queen' is a classic type with green leaves and rosy red heads when the central leaves color up. 'Scarlet', on the other hand,



Kirigami Mix

*Many comments were made about replacing the bucket water periodically for kales. If not, the sulfury compounds released from the decaying foliage will definitely get your attention. Think of kale as "smart" cut flowers—they let you know when their bucket water needs to be replaced!*



'Crane Feather Queen Red'

does not form a true head but produces long stems adorned with feathery reddish-purple leaves. 'Crane Feather Queen' was harvested mainly as a single "cut flower", while 'Scarlet' was harvested either as a single stem or as individual leaves, with at least two Trialers reporting harvesting 8 to 22 leaves from each plant. For those harvesting the entire stem, the average length was 24 inches, with several growers getting up to 40-inch stems.

As with all crucifers, the kales attracted a host of insects, including aphids, cabbage loopers and other worms, and harlequin bugs. Many comments were made in the postharvest section about replacing the bucket water periodically for kales. If not, the sulfury compounds released from the decaying foliage will definitely get your attention. Think of kale as "smart" cut flowers—they let you know when their bucket water needs to be replaced!

Both delphinium cultivars, Excalibur Mix (Syngenta) and 'Planet Light Pink' (Sakata Seed) were first-year flowering, with Excalibur producing the classic spikes of white, pink, and blue flowers, and 'Planet Light Pink' looser sprays or spikes of pale pink, which found a home as a filler flower. Both are cool-season crops that tended to perform best for a limited number of Trialers in cool climates. A

common problem with delphinium is low seed germination, which was noted again this year by a number of participants.

Rounding out the Trials were a couple of miscellaneous entries. The soft, pale yellow of cosmos 'Xanthos' (Harris Seed) was certainly well received, but was offset by the short stems, which averaged only 16 inches, although several Trialers harvested 24- to 30-inch stems. Snapdragon 'Maryland Dark Orange' (Ball/PanAmerican) was a hit for its color as well, although there was some discussion as to what the color was. Some noted that it was a dark, clear orange, but one grower said that it had a "pink/magenta tinge to the orange", another called it "almost like deep cantaloupe", and a third described



“more of a bicolor medium orange/medium pink than dark orange”. It produced an average of 5 stems per plant that averaged about 20 inches long, with some growers getting up to 10 stems/plant and up to 36-inch stems. It should be noted that one Trialer stated “This was my favorite flower in the Trial”!

Of the thirty named cultivars from two companies, based on the combined ratings score (market appreciation + repeat again + ease of cultivation) the top-ranked cultivars were four sunflowers: ‘Vincent’s Choice Deep Orange’, ‘ProCut White Lite’, ‘ProCut White Nite’, and ‘ProCut Orange Excel’, as well as lisianthus ‘Rosanne 2 Deep Brown’, and hibiscus ‘Mahogany Splendor’. These cultivars will be nominated for the ASCFG Cut Flower of the Year.

**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 grow and harvest trial plants using several methods. 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 grow the cultivar again. Review the results carefully. If a variety sounds interesting, but did not appear to do well, try it anyway; it may work well for you.

**Acknowledgments:** Thank you to each of the 23 evaluators who compiled and returned their data. We appreciate very much the time it takes to participate in the Trial. We especially thank Michelle Elston for being the first to return her evaluations! Thank you to the seed companies for providing the plant materials. We also thank Nathan Jahnke, Ben Bergmann, and Cristian Loyola for assisting with the NCSU Trials. While preparing the report we did a bit of editing of the comments for space and clarity; our apologies if we’ve altered the tone or content of anyone’s comments.



## Participating Companies

### AmeriSeed

Lompoc, California  
[www.ameriseed.net](http://www.ameriseed.net)

### Ball/PanAmerican Seed

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

### Genesis Seed

Rehovot, Israel  
[www.genesisseeds.com](http://www.genesisseeds.com)

### Harris Seeds

Rochester, New York  
[www.harrisseed.com](http://www.harrisseed.com)

### NuFlowers

Woodland, California  
[www.nuflowersllc.com](http://www.nuflowersllc.com)

### Sakata

Morgan Hill, California  
[www.sakata.com](http://www.sakata.com)

### Syngenta/Goldsmith

Gilroy, California  
[www.syngentaflowers-us.com](http://www.syngentaflowers-us.com)



## Participating Trialers

Tanis Clifton  
Happy Trails Flower Farm  
Dennis, Mississippi  
Zone 6

Julio Freitas  
The Flower Hat  
Bozeman, Montana  
Zone 4b

Jim Martin  
Compost in My Shoe  
Charleston, South Carolina  
Zone 9A

Jaime Sammons  
Jayflora Designs  
Fonda, New York  
Zone 5

Connie Dam-Byl  
William Dam Seeds  
Dundas, Ontario  
Zone 5

Jessica Gale  
Sweet Gale Gardens  
Hamilton, Ontario  
Zone 6b

Ingram McCall/John Dole  
North Carolina State  
University  
Raleigh, North Carolina  
Zone 7

Rodger Tschanz  
University of Guelph  
Trial Garden  
Guelph, Ontario  
Zone 5a

Lindsay Daschner  
Forget Me Not Farms  
Lambertville, Michigan  
Zone 4

Kee-ju Hong-Elder  
Hong-Elder Flower Farm  
Albuquerque, New Mexico  
Zone 7b

Erin McMullen  
Rain Drop Farms  
Philomath, Oregon  
Zone 8

Linda VanApeldoorn  
Take Your Pick  
Flower Farm  
Lansing, New York  
Zone 5b

Dave Delbo  
Dave's Flowers  
Elysburg, Pennsylvania  
Zone 6A

Barbara Jewell  
Island Meadow Farms  
Prince Edward Island  
Canada  
Zone 5b

Heidi Motz  
Willow Lane Flower Farm  
Mirror, Alberta  
Zone 3

Mechel Wall  
Pea Ridge, Arkansas  
Zone 7A

Michelle Elston  
Roots  
Carlisle, Pennsylvania  
Zone 6

Anna Kocon  
Little State Flower Company  
Portsmouth, Rhode Island  
Zone 6b

Denise Peterson  
Blue Door Garden  
Abingdon, Virginia  
Zone 6b

Susan Wright  
Shady Grove Gardens  
and Nursery  
Vilas, North Carolina  
Zone 6

Janet Foss  
J. Foss Garden Flowers  
Onalaska, Washington  
Zone 6/7

Barbara Lamborne  
Greenstone Fields  
Purcellville, Virginia  
Zone 7A

Martha Pineda  
Martha's Gardens  
Dubuque, Iowa  
Zone 5A





**Summary of Comments.** Note that many respondents did not make specific comments on each cultivar and in a few cases, comments have been shortened because of limited space.

### ***Aquilegia caerulea* Kirigami Mix**

(Syngenta/Goldsmith)

**Good Qualities:** Stunning array of colors (4), light yellow, WOW!; Easier to grow from seed compared to other aquilegia; Some plants bloomed the first year, flowers were up-facing which is nice; Great big flower heads; Easy to germinate.

**Problems:** Did not flower this season (2); Very short stems (3); Saw no usable stems in first year—perhaps planted too late with the wet, late spring?; Only one plant bloomed, perhaps it needed more vernalization to promote flowering; Only some of the plants bloomed the first year, we had a rainy spring and could not plant out until late May though; Did not take our summer heat very well; Plants were seeded in the spring, no blooms until September which were sparse and surprising, I wasn't expecting them, but the color from the few stems that came up has been amazing, looking forward to next spring for a lush harvest, fingers crossed; Did not germinate for me; Seems like any other columbines; The foliage on this plant was pretty, full but very short, not many flowers and none were marketable because of the length, I'm hoping that they will be taller next year; Would probably be best as fall-planted, as spring-planted, only a few blooms with short stem length.

**Similar Cultivars:** Other aquilegia hybrids.

**Postharvest Recommendations:** None provided.

**Comments:** May have stunted by holding in plug trays too long, foliage grew, but only one plant bloomed, will see if they winter over; I look forward to seeing how this plant does next spring, the colors were lovely, I liked the upfacing flowers, the plants are healthy so hopefully there will be good stems for harvest in the spring; Sorry I had very poor germ results with this variety, I did start another variety of aquilegia the same day and it did well; Some plants are starting to sprout



back out now that the temperatures have cooled down some; We planted this in the spring of 2017 when we received the seed, we were able to harvest small amounts of stems, but not enough to market, hoping for more yield information in 2018; 100% germination with cold stratification in January; Terrible germ; It did not tolerate our hot spring this year, few short stems obtained, would recommend fall planting for best performance.

### ***Campanula rapunculoides***

**'Campbell Blue'** (Syngenta/Goldsmith)

**Good Qualities:** Nice colour of blue (5); Amazing postharvest life (2); Excellent height in tunnel, blooming early; The daintiness of the bells! I loved this so much more than other campanulas; It seemed healthy, no insect or disease issues, it is still blooming back in our field, it holds well in the cooler, easily germinated; Good filler flower; Loved the size of the bloom, small, plants continued to bloom all season with tall stems that were great for vase work; Interesting, something different; Long stemmed.

**Problems:** None; The plants were a little weak? could have been a matter of them being in trays too long—late spring this year; I found the blooms did not open evenly and therefore made the stem look like it was past its best, even though it was

not; Lots of short stems, doesn't handle weed pressure very well (oops); This plant has been hard for us to grow, I put it outside this year, which was okay, but really only got one stem per plant, with promise of more, but not enough time, the color is not a popular color for us; Blooms were uneven, irregular in maturation, short vase life, slow growth; For a long stem I need the majority of the buds to open and stay turgid, these had blooms starting from the bottom up, not enough open or swollen enough to use, won't grow this again.

**Similar Cultivars:** None (2); 'Champion Pro'.

**Postharvest Recommendations:** Florallife extended vase life; #2 Chrysal, keeps well in cooler; Water and chlorine. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

**Comments:** I've been growing Champion varieties for several years now, big bell blooms which are nice early in the spring but then as the season moves on, the stems get impossibly short, the bell flower of Champion can also be too hard to work with in mixed bouquets, I liked the small flowers of 'Campbell Blue', delicate little spikes that were a delight to my customers, again, anything blue that grows all season is a hit!; Grew in tunnel, should probably be netted; I am going to try this one again to see if I like it better in a different growing season, they were not irrigated and had a very dry start to the season when they were set out, they are looking happy back there today (October 10); Bad germ; We liked the smaller flowers; None survived transplant; This created beautiful large plants, however, I did not get any flowers this season, fingers crossed they overwinter and I get some beautiful blooms next season!

### ***Cosmos 'Xanthos'* (Harris Seeds)**

**Good Qualities:** Unique creamy yellow color (15); Very productive (2); Small dainty flowers; Blooms fast; Foliage is also useful as a filler; Nice; It even had a little tinge of pink sometimes; Popular with florists, many buds per stem allowed for continued vase life of average 5-6 days with a vase life of 4-5 per bloom; Great for fall sales, wholesale customers loved





them; I grew this one last year (2016) and was disappointed with the stem length, I had not included this one to try again for this year as I was disappointed with performance, however, in 2017 the result was much different, longer stems allowing for a deep cut and ensuring a supply of stems for several weeks, the colour is a welcome change, we used it in colour-themed arrangements and bouquets, it seemed to perform well and held its own with repeat blooms; Popular with designer; Very cute; Light and airy; Great subtle color well suited to wedding work (especially when the pink centers appear!).

**Problems:** Too short (13); Thin stems (2); Insect magnet during summer season, powdery mildew in fall succession; Flowers are too small, sets seed too fast, doesn't sell as well as it produces, if it had nice long stems I think it would be great, it gets ahead of us so fast we're always cutting it back; As with most cosmos, spray of blooms has both nice and dead flowers on them, even when harvested frequently, with the cream color, the browned flowers seemed even more pronounced and unattractive; Annoying to harvest, I ended up using it only in low centerpieces for special occasions where buttery yellow was needed, not worth harvesting for market; I'm torn about growing it again next year, nothing compares to it, but the back-breaking harvest may not put it on the grow list for next year; Did not germinate for me; Varied head size, and some inconsistency from plant to plant as far as size, shape and overall vigor; Not as forgiving as other cosmos

(especially when left in cells too long), disease issues, fewer viable flowers; Not very productive, even in its short state!; Underwhelmed with its performance; This is a landscape plant; Short season; Needs to be pinched to produce usable stems; Pinching and pinching required to get height.

**Similar Cultivars:** None (3); 'Lemonade'; Any single-petalled cosmos; Dwarf type cosmos in terms of height and stature.

**Postharvest Recommendations:** No, it was my first time growing 'Xanthos' and I treated them like any other cosmos and they did fine; Cut when just starting to open into water early morning or evening as for all cosmos; Clean water, pick early in morning, walk-in cooler, Chrysal #2 on hot days; Cutting entire stalk as opposed

*Cosmos 'Xanthos' was popular with designers; Very cute; Light and airy; Great subtle color well suited to wedding work (especially when the pink centers appear!).*

to single stems helps with hydration.

**Comments:** These all died in the field; Plants grown in field for summer succession and in hoop house for fall succession, hoop house plants are just starting to bloom, still short stems but longer than field, not sure I would grow in field again, Japanese beetles, along with most other insects, really liked them, fall succession in hoop house has less insect pressure due to the hoop house nature, (harder to find); We've grown this for two years, in the garden last year, I felt overwhelmed by it and unimpressed by the flower size and stems length, I tried it in the greenhouse this year, it was still too short, and flowers were too small, we don't like to pick anything for less than \$8 a bunch, it was a hard sell at that price, we sold a few bunches last year, because it was new; Cosmos is good in cool weather, but isn't great for hot, dry summers; We generally do not grow many cosmos due to their

short vase life, so I may be biased against them!; We got these in a bit late, so our numbers are skewed somewhat, great potential for cutting, we'll be trying this one again, for sure; Does it make a difference that we pinched this cultivar? would the side stems or would all stems have been better without pinching?; We will grow this one again for summer bouquets and bucket orders; Lost this early because of too much rain, am going to try again next year with extra spacing; 'Xanthos' is a pain, but worth it, I did find, having some trays that took a long time to plant, that once they were established, I gave the whole plant a "haircut" and it then pushed out more viable stems, whether this helped after being stunted in the trays or would be a general good piece

of advice to give them a hard pinch, I'm not certain; A waste of planting space, I was so excited for this color, but at 6-10 inches, there are not many applications for that length! won't waste my time again; We love this cosmos and have grown it for the last two years, but it is getting cut from production for 2018 due to the stem length; Weak seedlings, small overall

plant; We planted this in succession and it produced wonderfully; Will be trying this again next year under shade to increase stem length.

### **Delphinium Excalibur Mix** (Syngenta/Goldsmith)

**Good Qualities:** Beautiful colors (4); Nice that it is a first-year bloomer; Good frost tolerance.

**Problems:** Low germination (2); Short spikes (2); Delphiniums do not like the soils in our hoop houses! and this variety pretty much gave up the ghost early on and plants were removed, it could have been weed pressure, we did have a problem there for a while, or it could be high pH that we're experiencing (sulfur applied this spring), but for some reason I can't grow them; As with all spring-grown field delphiniums, this was short and unproductive, would try again with fall sowing, also, our customers do not





Excalibur Mix

care for delphinium; I have never been able to successfully grow delphinium, it appears they don't like my soil, I will be interested to see how they overwinter, maybe they will be hardier next season; Targeted by thrips; Deep tones.

*Similar Cultivars:* Pacific Giant Series.

*Postharvest Recommendations:* None listed.

*Comments:* Most likely held in plugs too long, hopefully they survive the winter and bloom nicer next year; I love delphiniums and pride myself on being able to grow larkspur from transplants each year with two solid successions, I'd love to incorporate big bold perennial delphiniums in the garden mix, but for years I have failed each attempt, I've kept three plants from this spring alive (barely) so we'll see if they can overwinter and be productive; We would likely have more stems next season when the plant is fully established; I grow larkspur instead of delphinium. I find it easier to grow and also much more abundant producer; Poor market sales due to dark colors.

### **Delphinium 'Planet Light Pink'**

(Sakata Seed)

*Good Qualities:* Beautiful pale pink color (9); The stems were very strong and sturdy, beneficial for use in foam

and small posy arrangements; The spray form is easy to use in bouquets as a filler; Great form, nice and open, added great airy texture to arrangements; Nice size and shape for weddings.

*Problems:* Too short (6); Poor germination (2); Stems were short until later in the summer, watch for mildew; Died in our heat; Delphiniums (not larkspur) struggle in our soils, I've never been very successful growing them, and this variety was par for the course, I have managed to keep several plants alive to overwinter in a hoophouse and we'll re-evaluate next spring, the few blooms I got this spring were unimpressive by the time they bloomed, short-stemmed, I had other white, light pink blooms that were nicer to go after; Spring-sown delphinium tends to be very weak when grown outdoors in our climate, which was true for this one as well, we have success only with fall-planted, spring-blooming delphiniums, since it gets hot so quickly in south-central Pennsylvania, also, our customers do not like delphinium in general, so my report is biased; Not vigorous, no rebloom, one cut; The flower is so small that it took many stems to use in bouquets; I have never been able to successfully grow delphinium, it appears they don't like my soil, I will be interested to see how they overwinter, maybe they will be hardier next season;

Germination rate was around 75%, stems were harvested in the beginning to promote longer stems, but that didn't happen; Poor stem thickness.

*Similar Cultivars:* None that we grow; 'Diamonds Blue'.

*Postharvest Recommendations:* Harvest early in the day, we did not use Hydrator, just #2 Chrysal.

*Comments:* It was hard to arrange with and not good for bouquets; We loved this for wedding work, with the trending soft pink colors we used it consistently in bouquets, crowns, and corsages, the colour and delicate nature offer desirable additions, also the germination was excellent! as some delphinium can be stubborn these seeds were easy to start, very healthy and vigorous, we do not use irrigation in our annual field and I feel that if they were grown in a hoop or irrigated field the stem length would be much better, we had a dry mid June till mid July which limited stem length, as we received more rain the stems were longer, also they had a long bloom window, and continued to bloom for us for at least 8-9 weeks, very branching but did not require netting, I started some a few weeks later as well, found the first planting produced more stems, the second planting had one nice flush again with proper irrigation, there is potential for succession plantings, I also grew the 'Planet Blue' purchased



'Sweet Magenta Bicolor'



from Ball Seed and had same ease to germinate, the colour of this blue I would describe as brilliant—recommend both; Would definitely grow this one again; Nice different delphinium; My florists prefer *Delphinium cultorum* to these; I grow larkspur instead of delphinium, I find it easier to grow and also much more abundant producer.

#### **Dianthus ‘Sweet Magenta Bicolor’**

(Ball/PanAmerican)

*Good Qualities:* Vibrant, rich bicolor (14); Sturdy stems (3); Excellent vase life (2); Excellent germination (2); One of my favorites of the Sweet series (2); Customers love the look of dianthus, hardy; No insect issues, reacted well to a mid-June sowing as well as an earlier one; Long-lasting in the field; Out of all the dianthus trials, this one was the most usable—the color was deeper and richer and worked well with many other crops in mixed bouquets, sold well at farmers’ market, again not marketable to my florist clients, though; The bicolor was very popular with customers, everyone wanted them; Same as the other Sweets, succession plantings work well; Beautiful round heads, uniform plant habit and bloom time; Full heads; A little taller than ‘Sweet Pink’.

*Problems:* Too short (3); Not usable for market; Some botrytis later in the season especially with rainy, damp weather and heavy morning dew, as we do not irrigate we found the stem length was short early in the season, with rainfall it did improve, typical of sweet William, removing lower leaves is time-consuming as each one is removed individually, the stems will often snap during this process; Brittle stems, stems were the shortest of all cultivars of dianthus that we trialed; Too hot of a color; All Sweet series is too short to field grow in our climate, would consider trying this color again in the greenhouse, planted in February to beat our hot late springs, produced many stems, but they were all too short and small to use; Doesn’t like our heat; Flowered from spring seeding, but stems were short, fall-seeded a second succession to overwinter, plants to be

grown in both hoop and field conditions, earlier blooms with longer stems expected; Too pink, poor retail reception, rain damage, not for weddings; Deer seemed to enjoy it, they nibbled early in the season, so I only got the stems from a second growth; Thinner stems; None; Not as many useful second cuts; Stem length is too short for anything but bridal work.

*Similar Cultivars:*

No; Dianthus Neon series (2), similar colors but much taller; Any Sweet.

*Postharvest Recommendations:* Cut in early morning into

water, we did not strip in field as it was too time-consuming and we have limited time to get the day’s harvest, they were stripped later in the barn, placed in Chrysal #2, cut when half to two-thirds of florets are opened, also I found from the second sowing these flowers were not put in the cooler after harvest as it was cool in our barn, I took into the house some that had only a tiny bit of colour, perhaps 2 florets open, and I was pleasantly surprised they opened fully, vase life two weeks; Clean water, walk-in cooler; Used plain water. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Too short (3); Neon series is much taller compared to this Sweet series (2); We found the Sweet series a helpful flower to have for excellent vase life and a wide range of colours, this variety as with the others in the series responded well to the late-season sowing June 13 into seedling channel trays, they were later planted to 50 cell and then through bi plastic 10 inches apart, they started

*Compared to the other dianthus varieties we trialed, ‘Sweet Pink’ was my favorite color. Soft pink is a great shade for blending in bouquets, we used this colour the most in our arrangements; Very easy to grow, takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation.*

#### **ON THE OTHER HAND**

*‘Sweet Pink’: Very thin stems; Very ugly bubble gum pink; Stem length is too short for anything but bridal work; Too short; Pink was a bit washed out; Produced many stems, but they were all too short and small to use; Don’t like our heat.*

blooming the later part of September and bloomed through until our first heavy frost in October, no insect or disease issues with the second sowing; All of the Sweet series were small headed and no impressive colors; Out of all the dianthus trials this year this one was the best, but still not amazing, we are not growing any of the dianthus trials again; Would consider trying this color again in the greenhouse, planted in February to beat our hot late springs, produced many stems, but they were all too short and small to use; Will definitely grow again!; Must be grown under cover for harvestable stems; I prefer the Amazon series for sweet William, much larger flower heads on the Amazon, I will be interested to see how the Sweet series overwinters; Loved it; Crop just about to bloom now in hoop house is definitely taller than the field-grown, later stems were real skinny with small heads; In general, not a great year for dianthus, with lots of rain, blooming dianthus rendered unusable with water staining, etc.





### **Dianthus 'Sweet Pink'**

(Ball/PanAmerican)

*Good Qualities:* Very pretty color (6); Long vase life (5); Good germination (3); Sturdy (2); Same as the other Sweets, succession plantings work well; Soft pink is a great shade for blending in bouquets, we used this colour the most in our arrangements; Very easy to grow, takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation; Compared to the other dianthus varieties we trialed, this was my favorite color; Lots of stems, this one was really prolific, color was varied and held well in the field; Great heads; Easy to grow; This pink is unique in the dianthus I have grown, I just wish the stem length was longer; No insect issues, we sowed this twice to see how it would be for a late season (October) cut, although it did not have quite as many stems as the main crop sown in April it showed great promise as a fall crop, a long bloom period making it useful for small bouquets and would be a recommended crop for you-pick.

*Problems:* Too short (8); Pink was a bit washed out (2); Produced many stems, but they were all too short and small to use; Don't like our heat; Too pink, poor reception, rain damage; Stems were hard to use, not tall enough for market bouquets, would use only in low arrangements; Deer seemed to enjoy it, they nibbled early in

the season, so I got stems only from a second growth; Did not move in wholesale at all, was a hard sell in farmers' market, but were able to move it through market and grocery sales; Very thin stems; Very ugly bubble gum pink; Easy to grow, not many issues; Stem length is too short for anything but bridal work; The stems took some time to get some length, with irrigation or adequate rainfall I'm sure results would be better, the shorter side stems tended to be weaker, as with most dianthus stripping stems can be time-consuming,

*Similar Cultivars:* 'Sweet Deep Maxine' (2), but 'Pink Deep Maxine' had a better, clearer, deeper pink color; Any Sweet series dianthus; 'Pink Magic'.

*Postharvest Recommendations:* Used plain water (2); Walk-in cooler; Cut before mature, 2/3 of florets open, rest will open in vase, strip carefully, if too fast stems tend to snap, keep harvested to encourage blooms.

*Comments:* Best suited to high tunnel production very early spring in Mid-Atlantic climate; Have planted a succession to overwinter to determine if light pink color works better in early spring rather early summer blooms, hopefully they'll have longer stems; Must be grown under cover for harvestable stems, wish it were a light pink; Comment on the whole Sweet series: this is a uniform series in height, shape, and bloom time, perfect for production cutting, it doesn't really rebloom, so growers should plan for that, but the consistency makes it worthwhile, we have grown it in drought years as well as this season (of rain and cool nights) which was ideal for dianthus, and have found it to perform equally well, recommended!; I prefer the Amazon series for sweet William, much larger flower heads on the Amazon, I will be interested to see how the Sweet series overwinters; Have a crop just now about to bloom in hoop house, definitely taller than field grown; Good color, very sturdy cut; When you have experienced the Amazon series, most others have a hard act to follow, all of the Sweet series were short, small-headed and pastel, no impressive colors, they may have done better if planted in the fall, I may

do a tiny patch to see this fall...nah, they still weren't pretty enough colors to waste space on another trial, sorry; This is just not a marketable crop for my region—no one will pay for dianthus and they certainly do not want bubble gum pink so it was not a good one for us; The Sweet series is a staple for us. We grow the white and mix every year, the added colours certainly are a plus, we direct seeded into 50 cell plugs, transplanted to 9-inch centres to biodegradable plastic with no irrigation, began harvesting July 16 from an April 1 sowing, harvest period was 5 weeks for us, as we leave all our plants in till next spring before tilling there were still short side stems, this would make a good home garden plant as well, I was hoping for a softer pink colour, I honestly found this shade a bit ordinary, not bright enough to add spark and not soft enough to be helpful in modern wedding arrangements.

### **Dianthus 'Sweet Pink Deep Maxine'**

(Ball/PanAmerican)

*Good Qualities:* Really nice deep, clear pink color (7); Tallest of the colors (2); Sturdy (2), same as the other Sweets; Held well in the field; Long vase life, edible flower, lots of usable stems; Height; Liked this colour better than the 'Pink', it seemed to be more vibrant whereas the pink was a bit dull, had the pink variety been a few shades softer in colour I think it would have been more useful, it was healthy and had good vase life, we will grow again; Very easy to grow, takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation; Tall thick stems, nice heads; Consistent just like the rest of the Sweet series; Long vase life.

*Problems:* Too short (4); No demand for this in our markets, used mostly in market and grocery bouquets; Terrible color, impossible for me to market, too hot; Not as many good second cuts; Would consider trying this color again in the greenhouse, planted in February to beat our hot, late springs, produced many stems, but they were all too short and small to use; Don't like our heat; Too bright; There are other cultivars with better color; I found the color to be a bit odd, was difficult to work



with in bouquets, deer seemed to enjoy it, they nibbled early in the season, so I got only the stems from a second growth; None.

*Similar Cultivars:* ‘Sweet Pink’ (3); Any other Sweet series dianthus; ‘Deep Pink Maxine’ has deeper, clearer pink color with no white; ‘Sweet Pink Magic’.

*Postharvest Recommendations:* Clean water, walk-in cooler; Cut into water early morning, strip leaves carefully not to break stems; Used plain water. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Not really marketable in my region; Better suited to high tunnel production very early spring in Mid-Atlantic climate; The Sweet series is very useful for us offering good variety of colours, easily germinated and grown, no pinching or spraying, excellent vase life and can have two plantings in our season, field grown from transplants, recommend this one, the only improvement would be a stronger stem and easier to clean stems! despite this we will be growing again, it is a very useful series; Must be grown under cover for harvestable stems; Jazzy snazzy color; I prefer the Amazon series for sweet William, much larger flower heads on the Amazon, I will be interested to see how the Sweet series overwinters.

### **Dianthus ‘Sweet Pink Magic’**

(Ball/PanAmerican)

*Good Qualities:* Vibrant color (7), best pink Sweet of the trial; Easy to grow (3); Long lasting (3); Prolific (2); Sturdy stems (2); Edible flower; None; Like the colors; Nice uniform habit, few cultural issues; Visitors to our trials commented on the fun range of colours in each bloom, consistent uniformity of height and bloom size from plant to plant; Takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation; Florists liked this pink better, strong stems, although later flowers were skinny; Consistent; Our favorite in the series other than white, which is amazing, the combination of colours made for interesting bouquets.

*Problems:* Too short (5); Stems were somewhat brittle, just not a lot of demand

in our markets; Terrible color, impossible for me to market in my region, way too bubble gum pink; A hard-to-use “tie-dyed” color of white and pink on same stem, did not stand out in a bouquet, looked washed out, all Sweet series is too short to field grow in our climate, produced many stems, but they were all too short and small to use: Don’t like our heat; Bloomed late; People think it’s either phlox or over the hill; Not marketable; Deer seemed to enjoy it, they nibbled early in the season, so I got only the stems from a second growth; Mostly white/washed-out pink, thin stems; None; Least popular color of varieties for sales; Nothing that impressive with this pink color, the stems were too short for anything but small arrangements and wedding bouquets; Same as typical dianthus, stripping stems and stem strength, the longer the stem the more likely it would be to snap, would love to know if there might be a recommended amendment to strengthen stem, not just this variety but all sweet William in general.

*Similar Cultivars:* ‘Amazon Rose Magic’ (2); Any other Sweet series dianthus.

*Postharvest Recommendations:* Clean water (2), walk-in cooler; Cut early morning, take care in stripping to not break stems stored in #2 Chrysal, we did not use hydration on this variety. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Just a terrible color; Sweet dianthus is better suited to high tunnel



production in our Mid-Atlantic climate; Colors fade in postharvest; Seeded for overwinter growth in hopes of getting longer stems; Easy; I prefer the Amazon series for sweet William, much larger flower heads on the Amazon, I will be interested to see how the Sweet series overwinters; When you have experienced the Amazon series, most others have a hard act to follow, all of the Sweet series were short, small headed and pastel—no impressive colors; Our fave in the series, very useful and we will certainly be growing again, there was a time during July when I felt the stem length was not going to be good and the ‘Magenta’ seemed to be tallest by at least 2 inches for about 10 days, then they seemed to gain momentum and gained some more height, keeping the stems harvested prolongs the production. It also responded well to the mid-June sowing, the first sowing in channel trays April 14, we began harvesting July 18.



## Hibiscus ‘Mahogany Splendor’

(Harris Seeds)

**Good Qualities:** Gorgeous color of leaves (16); Awesome texture (9); Productive (6); Long usable stems (4); Season-long production (2); Looks like maple leaves (2); Great for centerpieces or anything where it is directly in water; This cultivar was very popular with my customers at market, and with brides; Never saw a bloom, but I hear they're beautiful, cut and regrowth was strong providing a lot of stems per plant; Autumn-leaf look with better hydration qualities than Japanese maple, can cut multiple sections per stem; Shape, few insects; Florists loved it, I loved it in my designs! nothing quite like it, mine didn't get really tall, so we'll start them under low tunnels next year to get them going and definitely net them; It branches out when cut to make more, shorter stems for later harvest, can take cooler temperatures to be a fall filler, perfect for bringing the burgundy colour to a fall arrangement; I can't say enough good things about this plant, it's a great substitute for ninebark, which the deer decimate in my area, great



‘Mahogany Splendor’

*I can't say enough good things about this 'Mahogany Splendor'; it's a great substitute for ninebark, which the deer decimate in my area, great filler, looks fantastic in arrangements especially in the fall, I had no problem with pests or diseases on any of the plants, grew some in container and some in the ground, all did fantastic!*

filler, looks fantastic in arrangements especially in the fall, I had no problem with pests or diseases on any of the plants, grew some in containers and some in the ground, all did fantastic!!; Customers love it, cool tropical look, not common in our temperate region; This plant seemed very easy to germinate and grow, I had a couple of pots in our greenhouse as well as the field, they both grew approximately the same height, more than five feet, in the field where it was sheltered by a wind-break of broomcorn, it was netted early but soon grew past the netting, I do not think it would need support as it is a strong plant, the colour was pleasing and offered a welcome contrast, this plant has great vigour and kept growing after cutting, I found this to be a useful plant and will grow again next season; The plants performed amazingly well but in our heat this plant is a winner; Long lasting; Especially ideal for autumnal palettes. Unique leaf shape, easy to incorporate into arrangements; Came into season JUST when my clients were looking for interesting dark foliage (late summer, fall).

**Problems:** Can wilt easy (5); None (3); Doesn't hold well out of water (2); Some issues with hydration early on—have to wait until stem becomes semi-woody (2); We planted this seed too early, it germinated, and then it was so cold and dark and rainy it just sat there refusing to grow,

finally were planted in a high tunnel in July, they are growing there although we are back to cold, rainy weather, there are about 3 marketable stems per plant, but we haven't harvested them yet; lasts about a week before it starts to wilt compared to other foliages that last more than 3 weeks; Once in a while I would get wilt at just the top of the stem; Germination was not great for us, I'd say about 50%, also not cold tolerant, we covered them on the first frost and they did okay, but lost them when they were left uncovered when temps reached 35F; Japanese beetles love to eat it, in our temperate region it took a long

time for these to establish and take off, we got only about 3-4 weeks of cutting off of them before frost took them; Hydration issues—lower leaves need to be cut instead of shucked; It is cold sensitive; Some bug damage towards end of season; Conditioning is a problem; Takes a while to establish, definitely one to start early. **Similar Cultivars:** None (4); 'Haight Ashbury' is a more frilled variety; Ninebark; Japanese maple leaves.

**Postharvest Recommendations:** Cut early in the morning right into clean water, hydrate before storing in cooler; I used Quick Dip on this, needed to cut when it was cool; Used Floralife in harvest water, cooler to condition for two days; All stems rooted in the vase, so nothing special needed; Water with chlorine; We noticed right away that stems would wilt after harvest, so we moved to harvesting in early morning as much as we could, sometimes late morning, we placed stems immediately in hydrating solution (Chrysal Rose Pro) and cooler for a few hours and stems held up fine after that, we also noticed that the older the plants got through the summer the less wilting occurred; It will wilt if not kept in water; Used plain water; Had mixed reviews from customers and experienced differing results in our own vase trials, but haven't come up with a good answer ourselves; Requires Quick Dip and hydrator to prevent meltdown;



Wait until mature before harvesting, cut early morning or evening directly into water, did not keep well in the cooler, the colour lightened considerably, I would not recommend long-term storage in cooler; There could be wilt issues with this plant in high heat, I did not use or recommend in bouquets, but it held up tolerably well as long as in water and not super hot, cutting first thing and a solid time in cooler helps; I always cut these first thing in the morning, even with dew on them, making sure they are hydrated, then place a fan on them to dry in an air-conditioned room, plain water, no cooler, air-conditioned room, if storing change out the water and bucket and recut every 5 days with wilting still occurring on a small percentage of stems over a long period of storing, they do not hold up well in extreme heat of the farmers' market and if left in the cooler more than a day or two; **MUST** be put immediately into water, they wilt a little but come back after holding in a cooler, they root in water, if they are out of water, they wilt quickly; Quick Dip immediately after cutting; Quick Dip, early morning, also wait for the plant to mature—I waited about two weeks after I thought it was ready. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

**Comments:** I love it (2) and will grow forever; I think this is a great plant for some growers, it's good nice annual foliage, while we haven't tried postharvest on it yet, I've heard it can be difficult; Long-lasting, actually rooting and growing in water after cut, some florists stated that it does not like a cooler; This was the workhorse of the farm this fall, so happy to have this plant!; Would have liked more information about growing, waited for flowers for a while but then just started using the stems as colorful leaves, stems required floral foam in arbor arrangements, did better in bouquets in water than bridal bouquets where stems were out of water for a time; A great autumn filler/foliage!; Excellent germination with soaked seeds, unreliable foliage; I'm sorry I didn't keep track of the stem yield for this variety! if I had to guess I'd say at 10-12 stems per plant; We had sold this for

years as a background plant and never considered it for cutting, thanks for including it in the Trial and giving it a whole new purpose!; I can't say enough good things about this plant, I LOVE it!; We will be growing these again, starting them earlier, and possibly trying for some season extension in a hoop, our harvest data are a little short, because we didn't get a full harvest out of them, there was still lots of nice growth and cuttable stems when frost hit; This was a good plant, a welcome change to add the dark foliage to bouquet work, as the season progressed the stems seemed to last much longer, up to 2+ weeks, it would be a good plant to have especially for autumn arrangements, to take full advantage of the potential would recommend to try in a tunnel as the early frost would harm it considerably, it was difficult to determine the number of stems as we used them for various-sized arrangements; Would highly recommend; We use these as a filler in grocery bouquets, wholesale straight bunches, and in our farmers' market bouquets, they really help fill up bouquets, especially when you are short on flowers, I cut some late into the fall and kept in a vase inside our home and they had the most beautiful deep, deep burgundy hibiscus blooms (for only a day, though); Favorite plant of the Trial; Definitely a mainstay crop for us, will be expanding production next year.

### **Kale 'Crane Feather Queen'**

(Harris Seeds)

**Good Qualities:** Beautiful feather form (7); Sturdy/strong stems (3); Long vase life (2); Color (2); Good germination (2); Love this variety of kale and will continue to grow—nice long, tall stems that did not flop over without staking; Looked great in



all my fall work; Unique shape and colour; Even though most of the pictures I'd seen showed more of the purple color coming through, mine was definitely more on the green/white shades, with a purple center, 99% germination, upright stems that were easy to work with, it would look great in a mixed bouquet and customers thought they were fun, but no one bought it! I'd grow it again to include in a mixed bouquet; Color is really nice, our customers loved it, they sold first over traditional leaf-flowering kale; Nice change from traditional Crane cabbages, could potentially be used as a filler for fall bouquets—seemed to be wider and bigger than cabbages on stems—would try wider spacing to do this, we currently space at 4 inches for cabbages (2/1 pattern in hortonova), white is especially pretty; Huge heads, awesome stem length, holds after frost; Loved this variety just as much as 'Feather King White', hardy, stems that did not flop over, we used no netting or staking, will definitely grow again; Nice size for bouquet work; Good filler in a bouquet, responds well to succession planting, easily grown; Best cut flower kale I know of, second year we've grown it, best seller.



**Problems:** Bugs love it, especially aphids and worms (8); must be watched daily for insects, which is a problem we have with all kales (2); Would like to find a way to get smaller heads, I planted them pretty close together in hopes they would be smaller but no luck, a variety that didn't get as thick of a stalk would be ideal; Single stems, limited uses; Did not make it to maturity, was eaten to the ground before it was even a few inches tall; Needs staking to keep the stems straight and one stem per plant; Needs netting; Long-season brassicas are tough to grow due to harlequin infestations, hand-picking and spraying Bronner's peppermint soap wasn't enough, plants were hit so hard that they died, we just couldn't keep up, HOWEVER, since these plants acted like a trap crop, our Tuscany kale (for eating) rebounded beautifully, if we were to grow again, we'd have to figure out how to cover the plants for the season, build a screen house to keep them safe and sound, hand-picking harlequins is insane! I filled quarts of soapy water with the little buggers! PyGanic had little effect; We are wrapping up the season by the time this comes into production, we need to move into field clean up, etc. and our farmers' markets are over, so we do not have a good market for them; Too thick of stems, would be more usable if stems were smaller; I really didn't like this variety compared to the rest, most of them didn't "flower" but instead made undesirable cabbage head, all of the stems flopped over, they were planted close with no netting like the rest but this was the only variety that fell over, maybe due to the large balls of cabbage heads forming on the top; Plant at very close spacing to avoid large stems.

**Similar Cultivars:** 'Crane'; Any other flowering cabbage.

**Postharvest Recommendations:** Water with chlorine; Water got really stinky! Ah hah, we changed the water every 2-3 days, vase life of 9 days, until the lower levels of the rosette started turning; Frequent water changes helped minimize that "cabbage" smell; Clean water, pick day before selling due to cabbage smell if held too long; Cut into water, do not overfill buckets as it will bruise the bloom.

**Comments:** Did not color up (2); I just

loved working with this, didn't have to worry about wilting, just kept going and going; I didn't sell this one by the stem, but I also didn't use it for my CSA, I didn't plant enough, I just grew it for the Trial; Did not sell any; In cool season fall outdoor arrangements these can last for several weeks, because we did not stake and the plants blew over, we got multiple shorter stems, which was not a bad thing!; Love these and will grow more!; Requires weekly spraying of Bt for cabbage moth; We really love this crop, I will grow again next season and try to market it better; I planted this variety three times, the first which I would not do again, was too large and was not something we needed in our earlier bouquets, by planting later mid-June and again in late July it helps to avoid the cabbage moth as well they did not get all large, next year I will experiment with direct seeding, I

*We loved 'Scarlet' kale.  
I did not market it well  
enough and the timing was  
off for the time of year but  
I think it can be marketed  
better—it really is a  
gorgeous crop.*

found the late sowing this year to be the easiest, I did not net, nor add fertilizer other than compost application in June, no irrigation, no chemicals of any type were applied, the last planting was definitely most beneficial to us, we did not need to net or strip stems prior to harvest, insect damage much less, stem size much smaller which is more desirable in a mixed bou-



'Rosanne 1 Black Pearl'

quet; I love this kale for fall, we tried an early spring harvest time but customers were not receptive, best for fall.

#### **Kale 'Scarlet'** (Harris Seeds)

**Good Qualities:** Beautiful rich purple color (8); Hardy (3), lives beyond first frost; Beautiful, full stem, used whole plant as filler for bouquets, and it was lovely! will definitely grow this one again, no netting required since it's not as top-heavy as most cut flower cabbages and kales; Nice foliage, lasts all season long; Even though I think this would be a great filler for bouquets, I'd grow them again to sell to interior designers, we treated as a one-and-done crop, but the tall full stems yielded about \$5/stem, it didn't really get traction with florists like I thought they would in the fall, we cut them low, almost to the base, maybe 5 inches off the ground, side shoots came up after a while, just didn't have time to see how long they would get, so I'm interested in trying next year and "pinching" them to see what comes up; Nice leaf shape, beautiful in fall arrangements; Used as a foliage, it was a great texture and color added to edible arrangements, will grow again, conversation starter for sure, using it for Thanksgiving arrangements; Texture,



height; Easy germination; Plant leaves were so big that was hard to use; Love that it looks like a palm tree; I cut from the bottom and got tons of leaves to use in arrangements, as the season wore on some of the plants in a protected cool area grew huge and produced leaves large enough for me to use in bouquet work!

**Problems:** High insect pressure (5); We harvested mid-July, it had a bit too much of a fall feel for that time of year, we will definitely grow again, but plant July for September harvest, needed to spray with Bt several times; Single stems, limited uses; We did have some aphids on these, but not as bad as in the Crane cultivar; Did not make it to maturity, was eaten to the ground before it was even a few inches tall; Stems are somewhat large, limiting what they can be used for, some customers were unsure of how to use them; I found this grew too large from an early planting, the stem was too thick and needs to be sown much closer together aiming for a later harvest window; It is a heavy look for my wedding clients, but we used it in several weddings and loved it, I will grow again and market it better; It is kale, so the stem length is short, I use it in edible bouquet work; Great landscape plant.

**Similar Cultivars:** 'Redbor' (3).

**Postharvest Recommendations:** Water with chlorine; Even though I harvested some leaves off of each plant, I treated this as a one-and-done, cut at the base and sold them to interior designers for their home shoots, they loved the tall stems, the color and the interesting foliage; Morning Harvest helped with hydration issues; Clean water, clean buckets, harvest day before selling.

**Comments:** Leaf length: 13-17 inches, leaf width: 5-6 inches; Too hot here, did not color up; We spaced at 10-12 inches, I think it could be grown even tighter, also worth succession planting for extended fall harvest, could even be grown in the high tunnel like cabbages on stems; I didn't sell this one by the stem, but I also didn't use it for my CSA, I didn't plant enough, I grew it just for the trial; Did not sell any, but could use individual leaves; This was a fun addition to the farm, we're still enjoying using them and plan to keep cutting on them for Thanksgiving and

holiday arrangements; Required weekly spraying of Bt to prevent excessive insect damage; Groundhog ate most of them, not coloring up yet at the end of October; I think in order to best use this plant for bouquet work for I would succession sow/direct seed to keep the stems smaller and plant shorter, it would be more useful for a late summer/fall item, I would never sow it again early as it was just too large, the colour was wonderful and I look forward to trying it again 2018; If I were to try again, I would plant it a lot tighter to try to get smaller plants, also need to find out if I was doing something wrong that I didn't get longer vase life; We loved it, I did not market it well enough and the timing was off for the time of year but I think it can be marketed better—it really is a gorgeous crop; I LOVED this plant and used the heck out of it, it grew and grew, heads were perfect for bases and I even used them in pumpkin arrangements that were gorgeous, this was a workhorse plant and I will keep it as a staple.

#### **Lisianthus 'Rosanne 1 Black Pearl'** (Sakata Seed)

**Good Qualities:** Awesome dusty purple, antique shade (6), very much in keeping with moody, tonal bouquets that are popular this season, first cut is a very nice full spray with many buds, nice smaller head for lissies; Great for wedding work; Strong stems; Good form, long lasting, good \$ per stem; Firm petals; Full bloom.

**Problems:** Second flush was not as tall as some lissies, seemed more attractive to thrips than some other varieties; Shorter than other lissies; Color didn't have a lot of appeal to customers, some thought they "looked dead", it was a hit or miss; Poor germination, limited uses; Harvest window is feast or famine, customers who loved the variety were disappointed to have it for only 3-4 weeks, color is somewhat restrictive to certain designers; Shows thrips damage easily; Seems to show the slightest water damage, became mostly useless for my florists but sold fairly well at market, and went into a lot of mixed bouquets; The tinges of white streaks made it look like it was dying.



**Similar Cultivars:** 'Rosanne Dark Brown', it looks exactly the same petal-wise and plant shape but much darker in palette.

**Postharvest Recommendations:** Swap out with clean water and disinfected buckets every 3-4 days. NC State conducted vase life testing of this cultivar; see article in this issue for details.

**Comments:** Love this one!; Interesting color, we had some lavender flowers as well; Weaker than the others; We sold most of this through wholesale, and cut larger central stems as one stem, instead of cutting side shoots, subsequent cuts utilized side stems, Low germ; 18-30 buds per stem; Not growing again, water damage, and it almost looked like the petals were all burned on the edges.

#### **Lisianthus 'Rosanne 1 Green'** (Sakata Seed)

**Good Qualities:** Awesome bright green color (6); Pairs well with many other colors; Nicely-shaped buds and flowers, re-flushed for us in the field; Sturdy stems; Very firm petals, long vase life; Nice smaller size that worked well for wedding work.





'Rosanne 2 Deep Brown'

**Problems:** Short stems (2); Fair germination, weak seedlings, small blooms; Slightly weaker stems than the other cultivars in this series, rain damage was apparent in the field; Wish it had more petals, needs better presentation; Not marketable in bulk to florists, sold well at farmers' market and in mixed bouquets; Not as productive as other lissies, including other Roseanne series, not as tall as other Rosannes, green color didn't seem to be popular with our brides this season (however, we'll definitely grow again and hope for a different color trend!).

**Similar Cultivars:** 'Mariachi Lime', but Rosanne is smaller; Other Rosanne series, nice firm petals.

**Postharvest Recommendations:** Clean bucket and water every 3-4 days, holds very well in walk-in cooler. *NC State conducted vase life testing of this cultivar; see article in this issue for detail, s.*

**Comments:** Solid seller in our wholesale markets, amazing vase life; Need to plant earlier to get better stem length; 1-25 buds/stem; Low germ; The color is amazing and fun to grow, but my clientele are very classic wedding folks for New England, they mostly need softer, richer greens, not so hot.

### **Lisianthus 'Rosanne 2 Deep Brown'** (Sakata Seed)

**Good Qualities:** Gorgeous color, like a dusty deep plum (6); Sturdy stems (2); Very usable, surprisingly popular; Long life; Sold very well in wholesale; Firm

petals, long stems, lots of side branching, endless uses and both florists and farmers' market folks bought it all up; Worked great with burgundy/grey color scheme that we saw this season, great, tight and full flower cluster, nice, smaller flowers that were good for wedding work, excellent!

**Problems:** None (2); Weak seedlings; Wish it had more petals for more impactful presentation; Lower germination than other lisianthus that we grew this year; Shows thrips damage easily, florists not impressed with the color; The name! it is a mauve color, not deep brown, hard to teach florists and event designers what it is—they LOVE the color but the name is not intuitive; in general, all lisianthus this year had fusarium wilt, but the Rosanne series did better than other types.

*'Rosanne Deep Brown's'  
name is a problem! It  
is a mauve color, not  
deep brown, hard to  
teach florists and event  
designers what it is—they  
LOVE the color but the  
name is not intuitive.*

**Similar Cultivars:** Rosanne series.

**Postharvest Recommendations:** Clean bucket and water every 3-4 days in walk-in cooler. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

**Comments:** Interesting color; Doesn't show insect damage like some colors, great wedding color; Low germ; 2-27 buds/stem; I love this and will grow it forever, the dusty, muted deep plum was just the neutral color that blended well with so many designs, we loved it; As a staff, we preferred the 'Black Pearl', but found that this one ('Deep Brown') actu-

ally coordinated better with both summer pinks/whites and fall burgundy/grey/plum, designers started ordering more of this one and less of 'Black Pearl' as well.

### **Marigold '888 Deep Gold' (AmeriSeed)**

**Good Qualities:** Nice color, closest to orange (7); Incredible stem length, the tallest of all cultivars (4); Long-lasting (2); Produces a lot of stems when pinched; Very healthy, good germination, very vigorous! nice blooms very full and ruffled, lots of great branching stems especially those we had pinched at 10 weeks, if you were looking for height, 4.5-4.9 feet, with no irrigation, the blooms were wonderful, large, ruffled, and bright in colour; Pale orange color complemented 'Jedi Orange'; Bright and big-headed blooms filled out a bouquet nicely; Beautiful double form; Sturdy stems, impressive head size; Fills out bouquets; Nice-sized head.

**Problems:** Very strong fragrance when cutting and processing the flowers; We lost many stems of this plant because they snapped/bent so easily, probably wouldn't grow again; Thin stems; Not as many stems as 'Oriental Deep Gold'; not as productive, since we consider the 15-18 inch stem length of 'Oriental Deep Gold' as sufficient, I would not waste space on a less productive variety, flower heads are also smaller than 'Oriental Dark Gold'; It had the typical soft neck, and the upper stem was weaker and bent over easily after harvesting, the strongly-scented foliage was a definite turnoff for employees, especially as the plants matured, it was strong, we found this with ALL the marigolds in the Trial, in August, it was not as prevalent as in mid to late September, even I found it strong! the scent seemed to cling to clothing and hands; Customers do not like the way they smell; Required a deep pinch to encourage side shoots to be long; Lower branches make support challenging; Was not as productive as the others in the trial.

**Similar Cultivars:** 'Oriental Deep Gold' (4); 'Oriental Gold' (3); I find all the cut flower type marigolds to be very similar.

**Postharvest Recommendations:** We treated all marigold cultivars the same, sometimes we harvested early in the morning



and sometimes we just had to harvest in the heat of afternoon, I didn't notice a difference in vase life, and they were all treated the same postharvest, they were put straight into Chrysal #2 for cooler and moved to #3 for vase life testing out of the cooler; Plain water worked great; Do not overcrowd buckets, the necks break/bend easily, handle with extra care to prevent damage; Water with chlorine; stripping 90% of all foliage, foliage does not look good after going into cooler, Chrysal Pro 2 and gerbera tablet. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* I never know how to treat marigolds—should they be pinched or not, if so, when is the best time/place to pinch? I have not pinched in the past, the plant gets very shrubby after harvesting the first few stems; Cannot sell marigolds; A very good performer, however, if I had to choose, I'd choose 'Oriental Deep Gold' for my gold marigold; Japanese beetles were a real problem with the marigolds; This was a very tall robust plant and we found it healthy and required lots of space, I feel we would not need a plant quite as vigorous as this one in our limited marigold market, for anyone who is fortunate enough to sell marigold stems it would be a variety I would recommend to try, I would definitely give a good pinch at 10-12 weeks, it would make an impressive landscape specimen; Varieties were trialed in field, greenhouse, and hoophouse conditions, field plants produced smaller heads, shorter stems and were targets of insect damage much earlier and heavier than plants under plastic (hoop and greenhouse), heat and dry conditions didn't seem to bother them; My customers have been more accepting of marigolds, during a farm tour, I asked the crowd who liked them in their CSA bouquets, most liked them, bright, cheery and long-lasting, there were a few who said they didn't like their smell and to them it was something they grow in the garden just to keep pests away, not something they would put on their table; Great color and cultivar for our sales; Not much difference between three gold variations.

### **Marigold 'Falcon Yellow' (AmeriSeed)**

*Good Qualities:* Wonderful vibrant, clear yellow (9); Easy to grow (4); Long vase life (3); Productive (2); Tall (2); Easy germination (2); Not as fragrant as some; The best bright yellow marigold we've grown to date!; I found that 'Falcon Yellow' really branched out and I didn't pinch them, I could have sold these as 3 spraying-stem bunches, that a florist or customer could break up into up 10 usable stems, lots of blooms per spraying stem, average of 9 blooms per main (spraying) stem; Uniform flower size. Long stems with multiple blooms; Good head size; Fills out bouquets; Fairly sturdy; Wow! plant produced very large blooms with one main central long-stemmed spray with numerous long side shoots at the base; Mature height for us was 4 feet, they lasted well in event work, the blooms were large and worked well in garlands.

*Problems:* Customers do not like smell of marigolds (2); Heads easily break (2); Very strong fragrance when cutting and processing the flowers, short stems; Insect magnet outside; Not quite as productive as our other two standard varieties, 'Oriental Deep Gold' and 'Optiva Orange' (however, worth the sacrifice for the bright yellow color); Plants were not netted, the plants get top heavy so frequent harvest helps prevent flopping, but the ones we couldn't get to definitely fell to the ground, the nice thing is that they flopped at the base, so the stems stayed intact and still usable and saleable after harvest, no noticeable diseases or pest attraction; Foliar disease prone; Thin stems, shorter stems than other marigolds, customers rarely purchase these by the stem but seem to appreciate in pre-made bouquets, We didn't pinch this one hard enough, and ended up with short side stems, struggled to sell this color in our markets, customers bought orange hues 2 to 1 over yellow; Slightly shorter vase life than orange/gold varieties; Japanese beetles; Not as popular a color; None, needs staking, stems are really big; Same as for all marigolds, we find the necks and upper stems weaker, and need to be handled with care to prevent injury.

*Similar Cultivars:* No (2); 'Jedi Yellow'; I



find all cut flower marigolds to be similar. *Postharvest Recommendations:* Water with chlorine; We treated all marigold cultivars the same, sometimes we harvested early in the morning and sometimes we just had to harvest in the heat of afternoon, I didn't notice a difference in vase life, and they were all treated the same postharvest, they were put straight into Chrysal #2 for cooler and moved to #3 for vase life testing out of the cooler; Plain water worked fine; Stripping 90% of all foliage, foliage does not look good after going into cooler, Chrysal Pro 2 and gerbera tablet; Take care not to overcrowd buckets, harvest into water from field we put in #2, do not store dry.

*Comments:* Love this one! Will definitely grow again!; All the marigolds grew well, the orange color is most desirable in marigolds, it seems, we did have the marigold in plugs longer than we would have liked, due to a very late spring; Varieties were trialed in field, greenhouse, and hoophouse conditions, field plants produced smaller heads and shorter stems and were targets of insect damage much earlier and heavier than plants under plastic (hoop and greenhouse), heat and dry conditions didn't seem to bother them; I never know how to treat marigolds—should they be pinched or not, if so, when is the best



time/place to pinch? I have not pinched in the past, the plant gets very shrubby after harvesting the first few stems; Cannot sell marigolds; Already ordered more seed for next year!; Highly recommend pinching at about 10 weeks (for us), the pinched plants were a bit later but the stem strength and cleaner stems (less branching) made it easier to harvest, and stems were somewhat stronger.

#### **Marigold ‘Jedi Orange’ (AmeriSeed)**

*Good Qualities:* Wonderful dark orange color (11); Great head size (3); Spectacular for fall bouquet work; Easy to grow, blooms for a long time; We grew this at the end of our season, but I think it’s possible that it’s slightly more disease resistant than ‘Optiva Orange’ (with leaf spotting), I’d want to trial earlier in the summer to test again; Long-lasting, great for market bouquets; This was by far my favorite marigold cultivar, the blooms displayed the quintessential orange of marigolds, customers loved it, the best part was the stems branched so low we were able to harvest about 7 stems per plant, stem width was not thick, which made it a bit fragile for the size of the heads, but still great in design; These are my personal favorite of all the Trial marigolds; Sturdy stems, this was the best-selling of the marigold cultivars that we trialed for this year, super healthy plants; Vase life, fills out bouquets; The best of all marigolds I grew; Healthy plants, good germ; Super tall, very productive, great long-stemmed spray plus numerous long stem side shoots.

*Problems:* None (2); Stems had very small caliper, weak (3); Very strong fragrance when cutting and processing the flowers, The heads break easily; Slightly less productive than ‘Optiva Orange’ (fewer stems per plant); Some customers do not like their smell; The thin stems were hollow and the heavy heads caused stems to snap. Still great cultivar and worth growing for us; Customers rarely purchase by the stem but seem to enjoy when included in pre-made bouquets; Required a deep pinch to get longer stems; The Japanese beetles just loved these plants; Needs staking for sure.



*Similar Cultivars:* None (2); Similar form to ‘Optiva Orange’, we found them to be indistinguishable once harvested. However, ‘Optiva Orange’ produces 2-4 more stems per plant; ‘Garland Orange’; I find all cut flower marigolds to be similar. *Postharvest Recommendations:* Easy; Water with chlorine; We treated all marigold cultivars the same, sometimes we harvested early in the morning and sometimes we just had to harvest in the heat

of afternoon, I didn’t notice a difference in vase life, and they were all treated the same postharvest, they were put straight into Chrysal #2 for cooler and moved to #3 for vase life testing out of the cooler; Plain water works fine; Stripping 90% of all foliage, foliage does not look good after going into cooler, Chrysal Pro 2 and gerbera tablet.

*Comments:* Varieties were trialed in field, greenhouse, and hoophouse conditions, field plants produced smaller heads and shorter stems, and were targets of insect damage much earlier and heavier than plants under plastic (hoop and greenhouse), heat and dry conditions didn’t seem to bother them; It was bright and pretty, but definitely had a marigold smell, these were not too overpowering, but when other growers have some that smell up the whole market, it can be a turnoff for even gentler-smelling ones; A very good substitute for ‘Optiva Orange’; Jedi series did much better than Oriental series, more usable stems per plant and bigger blooms, I would definitely grow Jedi again; I never know how to treat marigolds, should they be pinched or not? I have never pinched and found that they get shrubby very quickly after harvesting the first few stems; Cannot sell marigolds; I put other marigolds (not in the Seed Trial) in another location on the farm hoping that they would be a host plant for the Japanese beetle—it just gave them two locations to munch; Will definitely grow this again!

#### **Marigold ‘Oriental Deep Gold’ (AmeriSeed)**

*Good Qualities:* Great strong gold yellow hue between the orange and the lemon (7); Long vase life (4); Very productive (2); Strong stems (2); Sturdy (3); Good-sized head (2); This is our standard gold for production, disease resistant, strong stems, huge gold flowers; The plants were incredibly robust and strong; Fills out bouquets; Healthy plants, excellent germ; The blooms are the largest I have ever grown, easily 5.5-6 inches and very full and ruffled, good vigour, worked well for garlands.

*Problems:* Thin stems (2); None!; Only



1-2 stems per plant; Very strong fragrance when cutting and processing the flowers; Bloom size was smaller compared to Jedi, not as many usable stems, bushier plant; This was the shortest cultivar of all marigolds in the Trial, the biggest problem with this cultivar was that the stems didn't branch out as much and I'm wondering if pinching would have helped with that, the stems were thick and strong and hard to work with in design work, I only got a few usable stems of each plant; Customers rarely purchase by the stem but seem to enjoy when included in pre-made bouquets; Japanese beetles; Not as long as other varieties especially after a few cuts (were relatively shorter); Needed to be pinched to control branching, required sturdy support, the plant itself was strong but when planted at even the recommended spacing they were too crowded and difficult to keep upright, foliage odour not pleasant.

*Similar Cultivars:* 'AFM 888 Deep Gold' (3); 'Oriental Gold'; Hard to tell a difference between all the gold varieties, 'Deep Gold', 'Oriental Gold' and 'Oriental Deep Gold' all look and perform alike, it will be a coin toss next year as to which gets planted; We could not tell a difference between 'Oriental Gold' and 'Oriental Deep Gold'; I find all cut flower marigolds to be similar. I also find that the golds and deep golds are so close in color that I would not purchase both colors.

*Postharvest Recommendations:* Stripping 90% of all foliage, foliage does not look good after going into cooler, Chrysal Pro 2 and gerbera tablet; Water with chlorine; Plain water works fine; We treated all marigold cultivars the same, sometimes we harvested early in the morning and sometimes we just had to harvest in the heat of afternoon, I didn't notice a difference in vase life, and they were all treated the same postharvest, they were put straight into Chrysal #2 for cooler and moved to #3 for vase life testing out of the cooler; Do not overfill buckets to avoid damaging stems, strip in field, remove all foliage before bringing from field cut into water in field, then to #2 Chrysal and place in cooler.

*Comments:* These were pretty enough,

there are, however, other marigolds that are more productive, therefore, I probably would not grow this cultivar again; After trialing 'AFM888 Deep Gold' and 'Oriental Gold', we'll continue to use 'Oriental Deep Gold' as our standard gold for production; I never know how to treat marigolds, should they be pinched or not? and if so when and where? I have never pinched and found that they get shrubby very quickly after harvesting the first few stems; Not much difference between other gold varieties; Customers really liked this as a bunch; Cannot sell marigolds; I grouped this one with 'Oriental Gold', finding them similar; Sowed these two Oriental colours April 24, good germination, they were transplanted to the field June 12, we had a wet, cold June and risk of frost that prevented an earlier planting, I would have given these two colours additional spacing as they are so vigorous and tall, I would plant as singles next time to see if the stems will be stronger and easier to harvest and keep standing, highly recommend pinching hard to encourage multiple single stems, we found they were all ready to harvest within a few days of each other, the unpinched blooms were quicker to flower, however, very branched and were harder to clean, the pinched stems were much stronger, less breakage and bent neck, foliage odor a concern especially as the plant matured.

**Marigold 'Oriental Gold'** (AmeriSeed)

*Good Qualities:* Great gold color (8); Productive (2); Long-lasting (2); Really good plant for fall bouquets (2); Nice size head (2); Easy to grow (2); Large double flowers, long stems; Nice for cuts, transplants easily; For sales and profit, this was the best cultivar, plants were strong, usable stem length at 22 inches tall; Sturdy, healthy plants, excellent germ; The blooms are the largest I have ever grown, easily 5.5-6 inches and very full and ruffled, good vigour, worked well for garlands; Strong stems.

*Problems:* None (3); Thin stems (3); Very strong fragrance when cutting and processing the flowers; Heads break easily especially in bunches, we tried making bunches smaller, but still had some bro-



'Oriental Gold'

ken heads, should probably be sleeved; Bushier plant, smaller bloom size, not as many usable stems compared to Jedi; Customers rarely purchase by the stem but seem to enjoy when included in pre-made bouquets; Japanese beetles; Only 1-2 stems per plant; Not as long as other varieties especially after a few cuts (were relatively shorter); Needed to be pinched to control branching, required sturdy support, the plant itself was strong but when planted at even the recommended spacing they were too crowded and difficult to keep upright, foliage odour not pleasant; Just slightly more yellow toned than the deep orange, very little difference, but the deep orange seemed to sell first, though that could just be circumstantial.

*Similar Cultivars:* 'Oriental Deep Gold', we could not distinguish the two, both in terms of color/form and productivity (2); All the golds are the same or seem really similar; The marigolds we trialed were all similar; '888 Deep Gold'; I find all cut flower marigolds to be similar, I also find that the golds and deep golds are so close in color that I would not purchase both colors.

*Postharvest Recommendations:* Easy, we use Chrysal #2; Water with chlorine; We treated all marigold cultivars the same,



sometimes we harvested early in the morning and sometimes we just had to harvest in the heat of afternoon, I didn't notice a difference in vase life, and they were all treated the same postharvest, they were put straight into Chrysal #2 for cooler and moved to #3 for vase life testing out of the cooler; Plain water works great; Stripping 90% of the leaves, Chrysal Pro 2 and gerbera tablet, cooler, leaves do not look good after being in the cooler; Do not overfill buckets to avoid damaging stems, strip in field, remove all foliage before bringing from field cut into water in field, then to Chrysal #2 and place in cooler. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* For all of the marigolds, we kept them outdoors to diffuse the fragrance, the pails then stayed outdoors on a covered porch in 20C+ weather for two weeks and stayed fresh, very long-lasting as a cutflower!; Marigolds did very well considering the growing problems we had this year, we were unable to get into the field until late May, they sat in plugs way longer than they should have and still

came along and grew well; I never know how to treat marigolds—should they be pinched or not? if so when and where? I never know whether or not to pinch, I have never pinched and found that they get shrubby very quickly after harvesting the first few stems and become difficult to cut; Cannot sell marigolds; I never sold a single stem; I grouped this one with 'Oriental Deep Gold', finding them similar; Sowed these two Oriental colours April 24, good germination, they were transplanted to the field June 12, we had a wet, cold June and risk of frost that prevented an earlier planting, I would have given these two colours additional spacing as they are so vigorous and tall, I would plant as singles next time to see if the stems will be stronger and easier to harvest and keep standing, highly recommend pinching hard to encourage multiple single stems, we found they were all ready to harvest within a few days of each other, the unpinched blooms were quicker to flower, however, very branched and were harder to clean, the pinched stems were much stronger, less breakage and bent neck, foliage odor a concern especially as the plant matured.

*Similar Cultivars:* 'Champagne Bubbles' (2), we did not see much difference in form/vigor/colors.

*Postharvest Recommendations:* Floralife extends vase life; Sealing cut ends to extend vase life.

*Comments:* Tried growing in crates in tunnel and they never really took off; Would choose either this one or 'Champagne Bubbles' based on plug availability or price, not enough difference in performance to choose one over the other in our trial; The plants took all year to grow and never bloomed, they are still growing and have survived a hard freeze, I'm not sure what's going on, or they were not labeled correctly; This is the second year I've tried to grow poppies, spring seeding produced several flowers, but I heard (and saw) from friends that fall seeding produced even more! I saved back some seed and have a beautiful fall crop getting ready to overwinter, excited for spring and it's just turning autumn!; Would not grow again because of germ rate but would consider if plugs were available; Bright colors; I lost the whole tray of these because of damping off; I direct seeded these in the spring, not many germinated, those that did were tiny and nondescript.

#### ***Papaver nudicaule* Pulchinella Mix**

(Syngenta/Goldsmith)

*Good Qualities:* Brilliant colors (6); Fun shape; Not as delicate as other varieties.

*Problems:* Poor germination (2); We had only two plants bloom the first year, they did not like to be transplanted so we lost some at that stage; Several plants never flowered; Slower to bloom than 'Champagne Bubbles'; Flowers shattered very quickly after being cut, the plants died in our heat; Doesn't like weed pressure, needs to be sown in the fall for earlier bloom time; Color not desirable for spring; Not vigorous.

#### ***Penstemon hartwegii* 'Arabesque**

**Appleblossom'** (Syngenta/Goldsmith)

*Good Qualities:* Gorgeous blushy color (8); Nice form—good alternative to foxgloves, can't wait to see how it does next year; Nice alternative to snapdragon for spike flowers; Different than a snapdragon or foxglove, more deluxe, Easy to grow, blooms fast, it's been through 5 frosts under 30 degrees, still looks awesome; It was a nice replacement for white foxgloves and a refresh from snapdragons! almost pure white in the early summer, that showed a dark pink outer petal as the temperatures dropped in the fall, survived frosts, will hope it comes back as a perennial next year; Nice stem length, very pretty; It was unique for wedding vases and bouquet work; The colour lends itself well for the current trend of blush pink/ivory tones, it is similar form to foxglove and snaps which adds an interesting addition to bouquets, they germinated well



Pulchinella Mix





and had no insect or disease problems.

**Problems:** Too short (7); Short vase life (3); Got a bit bug eaten; Petals tended to brown in the field; Seed did not germinate well, wilted very quickly after harvest; None, with the vole issues we had, I was surprised they left this cultivar alone; Poor germ rate; Stem length could have been greater, perhaps if it was grown with irrigation or in a tunnel, we had a dry June and were off to a slow start with no additional irrigation; I did not have much luck with this flower, only two plants survived our wet spring, when they bloomed they were too short to use, next year I am thinking I should have marketable stems.

**Similar Cultivars:** Foxglove (2)—for form; Snapdragon.

**Postharvest Recommendations:** Keep straight in bucket, clean water; Use hydrator; We harvested in the morning as much as we could and placed in the cooler in water with Chrysal #2 before using in arrangements, blooms held up well for about 5-7 days, when the lower blooms started to shatter; We harvested when half the blooms on the stem were open, usually in evening; Placed in hydrator for an hour then to #2 solution. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

**Comments:** We loved it, because we got

only 100 seeds, we did not have a ton of the crop to sell to florists, we ended up using in all in a wedding event we had and it was amazing and it has been put into production for 2018; I'm curious to see how this is when it comes back next year—I feel it could be popular in wedding designs, however, can't remember if it stood up in bouquets; Love this plant, most of the perennials I planted for this Trial did not bloom this year but I am excited to see what happens next year; Hopefully they produce better next year; None survived either seeding or transplanting; I will be interested to see if these overwinter and how they produce next season, the plants were great but they took a long time to flower (September flowering), flower stems were very short; Not enough product for proper sampling due to poor germ rate; We used this variety a lot in wedding work, I found it offered a unique texture and colour which was beneficial to us, I was surprised at how much we used it, and with the constant harvest it kept producing stems, it is actually still blooming today (October 30), we will grow it next year.

### **Snapdragon 'Maryland Dark Orange'** (Ball/PanAmerican)

**Good Qualities:** Very dark, clear orange (11) that does not fade in the vase, has a pink/magenta tinge to the orange, customers raved about the color; Fast to flower (2); First cut is tall and strong; Still blooming, nice stems; I grow flowers only in the field, of all the snaps I have tried, this variety has been the most successful, works really well in fall arrangements, gets much taller as the season progresses, it's October 22 and it is still producing flowers; Will definitely grow this again, the plants were strong, after the main stem was cut, 2-3 stems branched out at the base, for another flush at 22-inch tall stems, this second flush was definitely not as strong, stems were not as upright, but great for design work, I loved it! next year I'll try growing them closer together, they were grown in 9-inch spacing, which turned out to be not so great, I think they can be at 6 inches and yield taller stems; Good height; Well-filled spikes, healthy

plants; Sturdy stems, long flower heads; This is a strong plant, I think the early hot weather here really stunted its growth, I wish I had waited until the end of the summer to plant this so I could have had fall blooms.

**Problems:** None (2); Not good for outside plantings, short and disease prone; Not as thick, strong stems as Opus, not as many side shoots, field-grown snaps are not always the best in our Mid-Atlantic climate, due to it getting hot quickly here, these were planted in mid-April (4 weeks prior to frost free) but still struggled to be robust once our summer heated up; Long time until bloom in the field; I found this one fizzled out quickly for us, the weather turned warm and dry in July and I did not think it was as strong as some of our other varieties; We planted these in the high tunnel, I think it got too hot too fast since they were transplanted in March, they may have done better if planted in the fall, aphids; Voles loooooooooooooved them! we lost many plants that got chewed at the base, other than that, no major problems; Spotted stink bug really liked them; Much shorter than 'Potomac Orange'; Snap-







dragons do not get a high price up here, common; Need to keep up with netting better—it grew so tall it outpaced my nets—a good problem to have.

*Similar Cultivars:* ‘Overture Orange’ (2); Not that I know of, I don’t think ‘Potomac Orange’ compares to this, the color on ‘Maryland Dark Orange’ is an incredible dark orange/rust color, that seemed to have turned darker as the temps cooled down; Not that I have grown; ‘Potomac Orange’ is a much taller variety (24-inch stems), very similar color, ‘Maryland’ looks a bit darker orange which I really liked; Any other snapdragon; Pretty close to the orange in Opus series; ‘Potomac Dark Orange’.

*Postharvest Recommendations:* Water and chlorine; Used plain water; We harvested early in the day and placed in Chrysal Hydrating Solution for a few hours and moved to #2 for cooler storage; Chrysal #2 and keep upright in bucket in walk-in cooler; Support heads, they droop over and face down. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Probably great under cover; We grew ‘Opus Orange’, ‘Maryland Dark Orange’ and ‘Overture Orange’ all together, outside, Opus produced many

more (about 2-3 times) strong, saleable stems, however, Opus flowers fade to a pale yellow/pink in the vase, Maryland held its orange color the best of the three varieties; This was my favorite flower in the Trial, loved the color, loved the plant, it was started early in the greenhouse, and had to wait way too long to get planted out due to weather conditions, but it came right along and was awesome; Love this snap, will grow again, I would also like to try other colors from the Maryland series in the field; I would think this would be best sown for a late crop (fall) in our area both for colour and growth, the summer heat did not agree with this snap; Plants were grown in field and hoophouse conditions, both grew similarly, hoophouse stems longer and earlier, field succession hit with stink bugs early and hard, summer-seeded plants are just starting to flower, nice to have the orange; I love the color and will grow again, we simply do not get a good price for snapdragons in New England but we love to grow them just the same; Rebloomed in the fall on shorter stems; The heads grew too large for cut flowers.

### **Sunflower ‘Helios Flame’** (Harris Seeds)

*Good Qualities:* Great color (7); Very easy to grow (2); Sold well in farmers’ market (2); Stronger-stemmed bicolor than others we’ve tested, would be good for tonal fall work, fast to bloom; Good cut flower: Takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation, loved the smaller heads, they worked really well in smaller bouquets; Earliest to bloom—50 days from seeding, consistent pattern from stem to stem; It was the tallest of all cultivars trialed, I put down 36-inch usable stem because that’s where we cut them, but the plants towered at well over 6 feet, some stems branched out over the summer since we didn’t pull root balls for lack of time, and we ended up with a second flush of blooms, not as many or as big, not as great, but that was a nice surprise, still saleable stems!; This is another favorite of mine, I have grown it for the past 3 years and will continue

to grow it every season, long vase life, and, if planted early, will give you long, well-branched stems after the first cut, plus, customers really like it; Different; Nice form, straight stems; Nice color for fall, not early summer; Absolutely great color for fall! Love the orange/red ring radiating out to yellow!

*Problems:* None (2); Bicolors are unusual and interesting, but can be hard to match in a pink or purple bouquet; We prefer solid colors for our supermarket bouquets; Seems to have more floppy heads than ProCut, when arranging bouquets you need to nest between other flowers to keep head upright; I particularly did not like this cultivar, the color, which is probably what it’s attractive for, did not work for me and we couldn’t move them, customers just wanted a plain yellow sunflower, and the mahogany-colored ring I think was a turn-off, I can see how this would be a great addition in a mixed bouquet or fall arrangements; Two heads on one stem; As with most bicolors I found it opens quickly and it is front facing and very flat, not something I find desirable in a sun, the colour is popular with only a small percentage of customers; I wasn’t very keen on this one, colors not so great and quick to unfurl, not popular with costumers.

*Similar Cultivars:* ‘ProCut BiColor’ (4); ‘Joker’, ‘Ring of Fire’; Looks like most bicolor sunflowers; ‘ProCut Red/Lemon Bicolor’, but ‘Helios Flame’ has more of a golden yellow outer petal.

*Postharvest Recommendations:* Changing water and clipping ends of stems on daily basis provides better vase life!; Used plain water; Chrysal CVBN; Gerbera tablets, clean buckets, cooler; Water with chlorine.

*Comments:* Two hearts for loving it!; Deer like them, lost most of them to the deer; Not a personal favorite, both colour and growth habit; Harvest #1 (July 20) 1 stem/plant with a stem length range of 18-25 inches, harvest #2 (August 9) 6-8 stems/plant with a stem length range of 16-32 inches; Customers seem to want the standard or the white.



### Sunflower 'ProCut BiColor DMR'

(NuFlowers)

*Good Qualities:* The color is magnificent (5); Sturdy stems (3); Slower to open; Good, fast-blooming bicolor; Tall stems, the coloring on these was not as pronounced as in 'Helios Flame', which I liked better, the heads were larger than 'Helios Flame', which made them harder to work with, but still a great showy sunflower; Long vase life, I love the ProCut series of sunflowers; Pollen-free, great for market bouquets and sunflower bunch sale, sold well in farmers' market sales, slower in wholesale; Stem length; Customers really enjoyed the color, easy to design with; Good bicolor for depth of shading and ring size, plants were healthy, especially in a year of downy mildew.

*Problems:* None (2); Short vase life if water isn't changed regularly; Bug damage; Heads seemed to look down; We prefer solid color sunflowers; Bicolors are fun but can be hard to work with, they don't blend well with pinks or purples; No problems with the actual cultivar, they just didn't sell well with retail or florists; Buds on stems, but not multi-branching; Do not care for dark-coloured suns, I find they do not hold up like the typical sun colours, they have that typical flat face and floppy neck, they seem to open and deteriorate quickly with no holding ability, petals not strong and open to curl back.

*Similar Cultivars:* 'Helios Flame' (4); 'ProCut BiColor' (2); 'Joker', 'Ring of Fire'.

*Postharvest Recommendations:* Cutting stems and replacing water in vase daily increases vase life tremendously!!!!; Water with chlorine; Used plain water; Gerbera tablets, clean bucket, cooler; Chrysal CVBN. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* One client kept either a 'Helios Flame' or 'ProCut Bicolor' in a vase for 3 weeks by cutting and replacing water daily, fun test for her; Did not have any downy mildew problems until late in the year, after these bloomed; Flower color not consistent, some were solid color, some faint bicolor, some dark bicolor; We did not have any problem with downy

mildew this season (and we've struggled in the past) so it's hard to evaluate its resistance; Customers seem to want the standard or the white; Overall nice flower, not our biggest sunflower seller; No downy mildew issues, so DMR isn't appealing unless there is a price differential; I did not see any difference or benefit to the DMR over the regular 'ProCut Bicolor'; The bicolor was not a favorite and was hard to sell; My customers love this plant; I am not a fan of dark suns, due mainly to their inability to stay intact and last longer than they do, as with the other DMR varieties, this feature is very welcome, we had a very good year with little mildew issues, it is honestly difficult for me to say if the DMR variety showed greater resistance.



### Sunflower 'ProCut Orange Excel'

(NuFlowers)

*Good Qualities:* Great solid orange color, dark center (8); Strong stems (4); Long vase life (2); Very quick to bloom (2), approximately 5-7 days before 'ProCut Orange'; Tall stems (2); Very easy to grow, takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation; Compact flower heads, less quick to open; The best yellow sunflower I've ever grown! easy to grow, great germination, great yellow color on an easy-to-use bloom, customers loved it!; Smaller head which is nice in bouquet work; Would definitely be worth trialing for late summer production, we direct seeded 5/30; Healthy and nice; Most popular farmers' market sun, by far; It seemed more vibrant than the 'ProCut Orange', it faces upward which is desirable for bouquet making, an improvement to 'ProCut Orange'; Strong head;

Standard sunflower color to me, nothing exceptional; Great for market bouquets. *Problems:* None (4); Heads are a little too large for my uses; Front-facing heads can be a challenge in bouquet work, though they are great in straight bunches; Boring color, thin stems.

*Similar Cultivars:* 'ProCut Orange' (4); 'Sunrich Orange Summer'.

*Postharvest Recommendations:* I think all sunflowers like clean vase water and cut stem ends, nothing like a sunflower to get the vase all slimy!; Water with chlorine; Used plain water; We found this variety stored well dry, we often have too many coming on at the same time and experimented by cutting them and storing dry for up to two weeks in our cooler before rehydrating, for using fresh we would cut and place in #2; Chrysal CVBN tabs; Gerbera tablets, clean buckets, cooler. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Nice standard; This is a good variety, an improvement over 'ProCut Orange' with a deeper colour, it seems to have a larger centre, to us is an important feature and one that is lacking in most ProCut varieties, a definite improvement to 'ProCut Orange'; Great germination, we sold every bloom.

### Sunflower 'ProCut White Lite'

(NuFlowers)

*Good Qualities:* Unique color (9), LOVE LOVE LOVE the color; Sturdy stems (2); Very easy to grow (2); Long vase life (2); Great germination (2); New color for single-stemmed sunflowers; I really liked this colour and is going to be a refreshing change in the sunflower family, it offers a unique choice for bouquets especially early season where suns are thought of as autumn flowers, I found people very curious about this colour, especially this light-centred variety—they would immediately pick it out of a bucket and want to include in their purchase, also has a larger centre and larger flower than the regular ProCuts; Our supermarket customers loved this! this surprised us because they usually prefer a very traditional dark-centered gold sunflower,



they equally preferred ‘White Lite’ and ‘White Nite’, these had a sophisticated feel to them; Florists that we asked liked this light-centred version because it didn’t overpower the arrangement, good usability in mixed bouquets.; Well received by retail customers and florist, different and special; Incredible! my favorite cultivar in the whole Trial! I wish we had planted more successions of these, the heads were the perfect size, the stems were the perfect width, overall a total winner, no diseases present; Customers loved this sunflower, I had people calling me up and looking for me at different markets to get their hands on these babies! tell me where to get more because I must have them for next season!; Quick seller on the wholesale floor, as well as in farmers’ market; Thick stems; Will definitely grow ‘White Lite’ and ‘White Nite’ again, customers raved about them, marketable stems; Customers VERY excited about this variety, asking repeatedly if we are growing this next year, sold every stem; Smallish heads, great for bouquet work especially for white/light bouquets; Direct seeded; Takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation; Popular with market customers; Size of head.

**Problems:** None (3); More insect issues than with other cultivars (3), had to cut flowers fairly tight to defend against insect damage; I found the neck to be the weakest point and when using in bridal bouquets would need to reinforce the stem, in the early planting there were a small percentage of multiple blooms making them unusable, they appeared only in the earliest sowings; Stems nodded a bit over time, more so than traditional sunflowers; A number of the blooms wouldn’t open, many were too small; For some reason, the transplants did not perform well for this

*‘ProCut White Nite’  
are the reason I do  
these trials—to have  
these unique flowers  
before anyone else!  
Definitely the best  
new flower in years.*

cultivar, I planted them right next to the ‘White Nite’, but these were short, possibly because they were on the north side of the row in short days of late summer through early fall, did not get many harvestable stems; Not as long of a vase life as other sunflowers; Insect magnet during midsummer growth periods, plants seeded on 6/24/17 were unmarketable from bug damage when harvested on 8/19/17, but the next succession seeded 7/21/17 and harvested 9/15/17 were stunning; I felt the centre was too large for the petal length, pretty, but not as proportionate as I would have liked; Too quick to unfurl; Smaller flowers, heads dropped.

**Similar Cultivars:** None (2); ‘White Nite’ (2); ‘Jade’; I’ve heard it looks like ‘Jade’ sunflowers, but the shape of the petals on ‘White Lite’ is different, ‘Jade’

seems to have more elongated petals with smaller green centers, while ‘White Lite’ has wider petals and bigger centers that’s actually more yellow than green; Other ProCut varieties; I used to grow a variety called ‘Coconut Ice’ that was similar, can’t find seeds anymore, nice to find a single-stemmed all-white variety even if I need to watch seeding and harvest dates carefully due to insect pressure.

**Postharvest Recommendations:** Cut early in day, do not harvest when super tight as I found the neck a bit weak with these and they needed to be a bit more mature to stay upright; Water with chlorine; Used plain water; Chrysal CVCN. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

**Comments:** Will definitely grow more of these! (3); This was a highlight of our sunflower trials this year, people were very impressed with this one, including us, it takes a little longer to bloom than the usual 50ish days for most ProCut varieties, from a May 28 sowing it bloomed 64 days later, we did succession sow this one and found ourselves waiting for the next planting to begin, it also offered some side shoots after the main stem was cut, the weaker neck hopefully will be addressed, ‘ProCut White Lite’ is a definite addition for us going forward; Nice and special but lots of smalls and duds in the lot; I was able to charge more for these because of their uniqueness and customer demand; We were very impressed with this cultivar and will be looking to grow many more in

the coming seasons; Anticipating high demand for this flower; Will try these again next year during long days or late spring, but probably not fall; These sunflowers are guaranteed to be a hit with florists and retail customers and gardeners; I’ve always been and will continue to be a big sunflower grower, seeding and transplanting every 10



‘White Lite’



‘White Nite’

days helps me have sunflowers at market and for bouquet work constantly, love the different varieties that are coming out, would love to find more perennial varieties, especially ones with small heads for those tiny little places in a bouquet that need a touch of yellow; This was a great sell at all my markets, early in the season, not so much in September.

### Sunflower 'ProCut White Nite'

(NuFlowers)

*Good Qualities:* Creamy petals with contrasting dark center (9); Customers VERY excited about this variety (4), asking repeatedly if we are growing this next year; Easy cultivation (3); Excellent vase life (2); Sold every stem; Our supermarket customers loved this! this surprised us because they usually prefer a very traditional dark center gold sunflower, they equally preferred 'White Lite' and 'White Nite', a more sophisticated sunflower; could be good for event work; Unique; Lasts for days without browning like other light-petalled varieties; Well received by retail customers and florist, different and special; Same as 'White Lite', this cultivar was beautiful, easy to sell (it sold itself!), nice long stems (both 'White Lite' and 'White Nite' were about 5'8") and great to design with; I had people calling me up and looking for me at different markets to get their hands on these babies! they are unique and beautiful, tell me where to get more because I must have them for next season!; First to go at farmers' market and on the wholesale floor, had designers climbing into the truck to get them; Contrast is great in bouquets, customers love, good stems, MANY side stems with good height and sturdy stems (like 'White Lite'); This was a refreshing change from the usual sun colours; It was not a bright white, more like a buttercream white, nevertheless, nice option for sunflowers; Marketable stems; Very striking in a white bouquet! nice head size, not too big; Takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation, they are a little large for me, but that is overcome with the beauty; My favorite of the sunflowers for color; This is a great sunflower for early summer.



*Problems:* None (3); Heads nodded slightly sooner than traditional sunflowers (2); Deer find them tasty; A few duds, many were too small, even with summer plantings; Insect damage was more severe than on other sunflowers, need to cut earlier, heads were a little bit floppy, our designers seemed to prefer the 'White Lite', but they all sold quickly; Insect pressure higher than other suns; The only problem was the weak neck, it was healthy, and germinated well; Planted in fall, stems were short and cucumber beetles went to the white flowers first thing; Light color attracts insects! need to be careful of planting times so that they aren't being asked to bloom during peak insect pressure (July-August), September-October blooms are great, May blooms also did well; Bug magnet, quick to unfurl.

*Similar Cultivars:* None (2); 'White Lite' (2); Other ProCut sunflowers; 'Coconut Ice', but these were definitely sturdier and shaped more like the other ProCuts. *Postharvest Recommendations:* Water with chlorine; Used plain water; Wait until petals are lifted before harvest, if harvested too early the neck will not support the flower; Gerbera tablets, clean buckets, cooler; Chrysal CVBN. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* These sunflowers are guaranteed to be a hit with florists and retail customers and gardeners, we will be expanding production of these next year; Florists loved them, these are the reason I do these trials! to have these unique flowers before anyone else, definitely the best new flower in years; Will definitely grow more of this!; Very nice unique color; This was popular with visitors to our trial and Instagram account; Nice and special but lots of small and duds in the lot, florists loved them; I was able to charge more for these because of their uniqueness and customer demand, of the whites, this is my personal favorite; Yes, yes, yes to this one and its sister 'White Lite', lots more of these in our future!; 'ProCut White Nite' was another hit for us, we really enjoyed the colour and habit, I liked the fact they were larger than 'ProCut Orange' with a nice centre and strong petals, I would not recommend for shipping unless the weaker neck could be improved, it is a wonderful addition, looking forward to adding to our fresh sunflower list, this one was a couple of days later than the 'White Lite'; Will definitely grow this again and even though I am usually opposed to dyed flowers, if I have customer who must have a certain color, these apparently are dyeable, might experiment with that a little next season; Thanks for putting effort into



finding light-colored sunflowers, love them, and it's nice to find single-stemmed, pollenless varieties that I can continue to grow for years to come; This mixed well with yellow snapdragons, bupleurum, and daises, customers couldn't get enough of them; Customers LOVED the color, it was unique and easy to pair with other bright-colored flowers.

### Sunflower 'Sunfinity'

(Syngenta/Goldsmith)

*Good Qualities:* Small flower size great for bouquets and smaller arrangements (9); Great golden yellow color (7); LOVED THE COLOR!; Remarkable stem production. (7), the best I have ever seen; Extended harvest/cut-and-come-again quality (2); Different; Branching sunflower, even when unpinched, heads were pretty for petal-less look in arrangement—somehow the more open shape was useful for this; Nice stem length; From a May 28 sowing this variety did not stop until our first -0C temps, I would recommend it highly as a backyard sunflower; Multiple flowers per plant; Easy germination, direct seeded; Very easy to grow, takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation; Would look great as a landscape plant, looked so pretty in the field untouched because we stopped harvesting it because it was unmarketable; What a great little plant! we planted far more than we needed, but I didn't know they were a cut-and-come-again! will definitely grow again! plants are about 48 inches tall, 24-inch stems; Well branching.

*Problems:* None (2); Floppy, weak stems (3); Short shoots (3); Stems were not quite as strong as single-stemmed varieties, tended to nod in the vase, we prefer single-stemmed for bouquet production due to ease of harvest and programmability; Took a very long time to grow and produce flowers; Pollen; Too branchy, not a great cut for us; Postharvest was tricky, some did well while others wilted; the first blooms were beautiful, and I had a ton, but as the plant continued to bloom, the flowers did not look as robust, plus I think the bugs discovered them, the period



'Vincent's Choice Deep Orange DMR'

from petal lift to full-blown open was literally overnight, I thought they were supposed to bloom for months, I did two plantings and they finally died out after about 90 days, the second midsummer planting was not as productive and by then the bugs totally found their happy spot (cucumber beetles, etc.) so I got only a few stems from those; The high price and multi-branching habit will limit use for regular sunflower production, but for small patches and more ornamental use, this is a great plant!; Very bushy, hairy stems, unmarketable, not sturdy; Deer find them tasty; I couldn't figure out the right time to harvest this or how. I never seemed to get the timing right, either you do the whole thing and droopy side shoots (and really bulky) or cut out the centre and have not super useful sideshoots; To use this in a bouquet I found that single flowers were too short and a cut of 3-5 flowers left too much room to fill with other flowers.

*Similar Cultivars:* None listed.

*Postharvest Recommendations:* Used plain water; Cutting tight reduced pollen problems; Same as for any sun—cut into water early in day or evening; Gerbera tabs; Keep the water clean and stem ends trimmed for longer vase life!; Treated

like a sunflower, but vase life was a bit less than a regular sunflower. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Maybe has potential; Harvest #1 (July 20, 2017) 1 stem/plant with a stem length range of 15-25 inches, harvest #2 (August 9, 2017) 5-18 stems/plant with a stem length of 17-43 inches; The lower stems on the pinched plants had very small caliper; Would be great for a pick-your-own or other limited space situation; I would not grow again as a cut flower, it took way too long to produce flowers (almost 115 days), flowers were unspectacular, customers were unimpressed with this one; We weren't able to market this well, because of the pollen issue; Not a great cut for us; I would not recommend this as a commercial cut flower, the typical stems from a branching type do not lend themselves well for shipping nor do they have a strong neck as desired in a good sun, I would, however, highly recommend 'Sunfinity' for a you-pick cutting garden, or as a backyard plant for its amazing ability to produce stems, time and time again, I marveled at the ability of this plant to produce flowers, and the bright yellow petals were highlighted by the velvet black centre, I would have no hesitation recommending this variety for the above purpose, 'Sunfinity' is the best branching variety I have seen for nonstop stem production and good vase life, I did sow it several times as I do with all suns, the best production came from a May 28 sowing, directly into a 50 cell tray that was later planted in an unfertilized field with no irrigation, they require more growing room than standard singles in order to encourage the potential of the multiple stems, great variety!; I really like the 'Sunfinity' and will probably grow it again, but probably only as an accent plant or if I have leftover space in a row, not for production; Wish I had more seed for second or third succession, alas, next year I'll order some!; Great plant! glad to have trialed it, will grow again!; Flowers look like rudbeckias; I wasn't keen on this, but then again, I'm not a huge sunflower fan or grower; Looked great in the field; This really is a revolutionary Sunflower with



its long bloom time! Kudos to the breeder!  
*Note:* NCSU compared pinched and unpinched production—pinched plants produced 33 stems that averaged 25 inches long, and unpinched plants produced 29 stems that averaged 23 inches.

### Sunflower ‘Vincent’s Choice

#### Deep Orange DMR’ (Sakata Seed)

*Good Qualities:* Great color (8); Long vase life (4); Fast to flower (3); Sturdy (2); Good germination (2); Good flower size, plant health was good despite poor weather conditions—an excellent year to see downy mildew resistance!; No downy mildew, healthy, nice; Very easy to grow, takes neglect, did very well during our abnormally hot, dry summer, even with minimal irrigation, loved the petal shape; Small head; Great cut; Like the double petal layer, slower to unfurl; Holds up better than ‘Vincent’s Choice’; Great sunflower, probably a top choice, right along with ‘ProCut Orange Excel’, perfect for straight bunches, easy to sell—a winner; No pollen; Any variety which offers the benefit of downy mildew resistance is always helpful; Upright facing, layered petals; Great color presentation and stem length, easy grower, few IPM issues.

*Problems:* None (2).

*Similar Cultivars:* ‘Vincent’s Choice’, I could not tell any difference visually between the two, we, fortunately, did not have downy mildew this season (and we’ve seriously struggled with it in the past), so I could not tell if the DMR was significant or not, our main two suns are ‘Vincent’s Choice’ and ‘ProCut Orange’ for bouquet production; ‘ProCut Orange Excel’ is pretty similar in color; ‘ProCut Gold’.

*Postharvest Recommendations:* Added Chrysal CVBN tabs to water; water with chlorine; used plain water; gerbera tablets, clean buckets, cooler. *NC State conducted vase life testing of this cultivar; see article in this issue for details.*

*Comments:* Nice sunflower; I will be growing this one next season for sure, it’s a great all-around sunflower; Loved this one! have grown before and loved it then too!; Harvest #1 (July 20, 2017) 1 stem/plant with a stem length range of 25-39 inches, harvest #2 (August 9, 2017) 3-5



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stems per plant with a stem length range of 6-17 inches; I’m not a huge fan, my customers prefer a more traditional flower in the yellow/orange color; We don’t usually have an issue with downy mildew, so we wouldn’t necessarily seek out a DMR variety, but it is a lovely sunflower; Not much difference from ‘Vincent’s Choice’; I succession sowed this variety later in the season when the DM starts to become an issue, this year was surprisingly good here with only minimal issues, as we did not have mildew problems this season I can’t honestly tell whether there was any benefit over the non-DMR, I will search out any DMR varieties to grow for 2018, any varieties offering the feature will be an obvious help in prevention; will definitely grow this one again, nice stem length even in short days of fall where the ‘ProCut Gold’ planted immediately next to and seeded at the same time, were much shorter and smaller.



**2017 ASCFG Seed Trial Results.** First row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed in the range line, several trailers responded and all gave the same rating.

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)
<i>Aquilegia caerulea</i> 'Kirigami Mix' Syngenta/Goldsmith	<b>0.5</b> 0-2	<b>9.3</b> 4-13	<b>2.6</b> 1-4	<b>3.4</b> 1-5	<b>3.7</b> 2-5	- -
Campanula 'Campbell Blue' Syngenta/Goldsmith	<b>2.7</b> 0-12	<b>17.8</b> 8-36	<b>3.6</b> 2-5	<b>3.4</b> 1-5	<b>3.8</b> 2-5	<b>7.4</b> 5-12
Cosmos 'Xanthos' Harris Seeds	<b>8.1</b> 0-20	<b>16.5</b> 5-33	<b>3.1</b> 1-5	<b>2.6</b> 1-5	<b>4.5</b> 2-5	<b>6.3</b> 4-14
Delphinium 'Excalibur Mix' Syngenta/Goldsmith	<b>2.1</b> 0-7	<b>18.4</b> 10-36	<b>2.5</b> 1-5	<b>2.8</b> 1-5	<b>3.0</b> 2-5	<b>6.0</b> 5-12
Delphinium 'Planet Light Pink' Sakata	<b>3.3</b> 0-10	<b>13.6</b> 8-26	<b>2.8</b> 1-5	<b>2.9</b> 1-5	<b>2.9</b> 1-5	<b>7.3</b> 5-10
Dianthus 'Sweet Magenta Bicolor' Ball/PanAmerican	<b>5.8</b> 1-15	<b>15.3</b> 8-30	<b>3.3</b> 1-5	<b>3.6</b> 1-5	<b>4.1</b> 1-5	<b>10.1</b> 5-14
Dianthus 'Sweet Maxine' Ball/PanAmerican	<b>5.8</b> 1-15	<b>16.0</b> 8-30	<b>3.1</b> 1-5	<b>3.1</b> 1-5	<b>4.0</b> 1-5	<b>10.6</b> 7-14
Dianthus 'Sweet Pink' Ball/PanAmerican	<b>5.7</b> 1-12	<b>14.2</b> 8-30	<b>3.1</b> 1-5	<b>2.9</b> 1-5	<b>4.2</b> 1-5	<b>9.9</b> 7-14
Dianthus 'Sweet Pink Magic' Ball/PanAmerican	<b>5.6</b> 1-15	<b>14.0</b> 8-30	<b>3.3</b> 1-5	<b>2.9</b> 1-5	<b>4.3</b> 1-5	<b>10.7</b> 7-14
Hibiscus 'Mahogany Splendor' Harris Seeds	<b>20.0</b> 3-100	<b>25.0</b> 8-48	<b>4.3</b> 1-5	<b>4.6</b> 2-5	<b>4.6</b> 2-5	<b>9.2</b> 4-20
Kale 'Crane Feather Queen' Harris Seeds	<b>1.1</b> 0-3	<b>24.8</b> 10-40	<b>3.6</b> 1-5	<b>3.9</b> 1-5	<b>4.2</b> 1-5	<b>13.9</b> 8-21
Kale 'Scarlet' Harris Seeds	<b>3.0</b> 1-22	<b>24.5</b> 10-40	<b>3.4</b> 1-5	<b>3.4</b> 1-5	<b>4.4</b> 2-5	<b>8.4</b> 3-21
Lisianthus 'Rosanne 1 Black Pearl' Sakata	<b>2.1</b> 1-5	<b>18.0</b> 12-30	<b>3.7</b> 2-5	<b>3.7</b> 1-5	<b>4.0</b> 2-5	<b>12.7</b> 7-21
Lisianthus 'Rosanne 1 Green' Sakata	<b>2.4</b> 1-6	<b>16.9</b> 10-24	<b>3.3</b> 2-5	<b>4.0</b> 2-5	<b>3.9</b> 1-5	<b>13.7</b> 9-20
Lisianthus 'Rosanne 2 Deep Brown' Sakata	<b>2.6</b> 1-6	<b>18.3</b> 11-24	<b>4.5</b> 3-5	<b>4.6</b> 3-5	<b>4.2</b> 2-5	<b>12.8</b> 9-21

<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.

**2017 ASCFG Seed Trial Results.** First row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed in the range line, several trailers responded and all gave the same rating.

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)
Marigold '888 Deep Gold' AmeriSeed	<b>9.4</b> 1-25	<b>19.4</b> 14-30	<b>3.3</b> 1-5	<b>3.3</b> 1-5	<b>4.5</b> 2-5	<b>12.5</b> 6-21
Marigold 'Falcon Yellow' AmeriSeed	<b>8.3</b> 1-25	<b>19.4</b> 8-36	<b>3.2</b> 1-5	<b>3.7</b> 1-5	<b>4.6</b> 2-5	<b>11.3</b> 7-20
Marigold 'Jedi Orange' AmeriSeed	<b>8.8</b> 1-25	<b>20.3</b> 8-37	<b>3.5</b> 1-5	<b>4.2</b> 1-5	<b>4.6</b> 2-5	<b>12.3</b> 8-20
Marigold 'Oriental Deep Gold' AmeriSeed	<b>9.0</b> 2-29	<b>19.9</b> 8-32	<b>3.3</b> 1-5	<b>3.4</b> 1-5	<b>4.6</b> 2-5	<b>11.8</b> 7-20
Marigold 'Oriental Gold' AmeriSeed	<b>8.6</b> 1-25	<b>19.1</b> 8-32	<b>3.5</b> 1-5	<b>3.5</b> 1-5	<b>4.6</b> 2-5	<b>12.6</b> 7-20
<i>Papaver nudicaule</i> 'Pulchinella Mix' Syngenta/Goldsmith	<b>3.1</b> 1-8	<b>16.8</b> 7-24	<b>3.1</b> 1-5	<b>2.4</b> 1-5	<b>2.9</b> 1-4	<b>4.5</b> 3-7
<i>Penstemon hartwegii</i> 'Appleblossom' Syngenta/Goldsmith	<b>4.0</b> 1-7	<b>14.5</b> 8-24	<b>3.5</b> 1-5	<b>3.8</b> 2-5	<b>4.1</b> 2-5	<b>5.0</b> 3-7
Snapdragon 'Maryland Dark Orange' Ball/PanAmerican	<b>4.9</b> 1-10	<b>20.8</b> 12-30	<b>4.4</b> 2-5	<b>4.0</b> 1-5	<b>4.1</b> 2-5	<b>7.0</b> 4-10
Sunflower 'Helios Flame' Harris Seeds	<b>1.5</b> 1-9	<b>37.1</b> 15-65	<b>4.1</b> 1-5	<b>3.7</b> 1-5	<b>4.8</b> 3-5	<b>8.1</b> 6-10
Sunflower 'ProCut Bicolor DMR' NuFlowers	<b>1.0</b> 1	<b>42.9</b> 24-72	<b>4.0</b> 1-5	<b>3.8</b> 1-5	<b>4.9</b> 4-5	<b>8.0</b> 5-10
Sunflower 'ProCut Orange Excel' NuFlowers	<b>1.1</b> 1	<b>41.1</b> 24-60	<b>4.7</b> 3-5	<b>4.3</b> 1-5	<b>4.9</b> 4-5	<b>8.3</b> 5-11
Sunflower 'ProCut White Lite' NuFlowers	<b>1.1</b> 1	<b>38.2</b> 12-72	<b>4.7</b> 3-5	<b>4.7</b> 1-5	<b>4.7</b> 3-5	<b>8.4</b> 6-14
Sunflower 'ProCut White Nite' NuFlowers	<b>1.1</b> 1	<b>36.5</b> 12-72	<b>4.9</b> 4-5	<b>4.9</b> 4-5	<b>4.7</b> 2-5	<b>8.4</b> 6-14
Sunflower 'Sunfinity' Syngenta/Goldsmith	<b>11.2</b> 0-33	<b>19.2</b> 8-30	<b>3.5</b> 1-5	<b>3.0</b> 1-5	<b>4.7</b> 4-5	<b>8.4</b> 5-14
Sunflower 'Vincent's Choice Deep Orange DMR' Sakata	<b>1.1</b> 1-4	<b>38.8</b> 6-84	<b>4.5</b> 3-5	<b>4.4</b> 3-5	<b>4.9</b> 4-5	<b>8.3</b> 7-11

<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.