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The *Cut Flower*

QUARTERLY

Association of Specialty Cut Flower Growers Inc.

ASSOCIATION

1988-2008

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The Cut Flower

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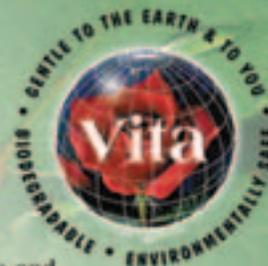
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FROM *the President*

Dave Dowling

With Thanksgiving and Christmas having come and gone for another year, I continue to be astounded at the poor quality of cut flowers that appear during the holidays at various retail businesses around town. Sometimes it is apparent that the flowers arrived at their destination in less than perfect form. The display wasn't there the day before, and it is full of flowers, yet the flowers are past their prime, with flowers fully open with brown petals around the edges, and flowers with creased and crushed petals.

Other times it is obvious that the flowers have been there a while. The water is brown, the flowers are wilted and half of them are basically dead. But there they are, still next to the register at CVS or Home Depot, in a Thanksgiving style sleeve, two weeks *after* Thanksgiving. No one at the store notices, or cares that the flowers should have been trashed a week ago. This scene is repeated all over the country during all the "Flower Holidays."

Our biggest "Flower Holiday" of the year is fast approaching. Valentine's Day is when possibly millions of people will make their *only* flower purchase of the year. As growers and sellers of cut flowers, it is our obligation to make sure that every customer gets more value with their flower purchase than they expect to receive when they place their orders. This is the best way to get a "once a year" customer to be a repeat customer throughout the year. If the floral business was half as busy the rest of the year as it is for Valentine's Day, we wouldn't be able to handle to increase in business. What a great problem that would be.

I'm asking everyone in the floral business—from the grower, importer, wholesaler, grocery store, retail florist to the farmers' market seller—to please strive to have the best possible quality cut flowers in your business. Don't deliver inferior products. If you see flowers in your cooler that are poor quality, trash them. When you see dead flowers on display at a box store or local grocery store, let the manager know that those flowers should be removed from the sales floor. If you found moldy bread or spoiled meat at the store, you would let them know. As people in the cut flower business, we are quality control for places that may not have cut flower freshness at the top of their list of priorities.

The floral business has changed dramatically in the past twenty years. The retail florist is no longer the only place to get flowers. The traditional retail florist makes deliveries and does weddings and funerals. Everyday flower purchases are made at the grocery store, farmers' market, or even Home Depot. And the Internet seems to be adding more buying options every time you turn on the computer. Along with more ways to buy cut flowers, there should be an increase in the number of floral buyers. Unless these customers get top quality products, they won't be customers for long.

I've said it before, and will repeat it again. Sometimes the best place for a cut flower is the trash can or compost bin. Maybe we all need to make a few more trips to the trash can. Then, in the long run we can make more trips to the bank with the increase in business that comes with selling the best quality products possible.

I wish everyone a great 2008.

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2008 NEW varieties

● AMERICAN TAKII

AMERICAN TAKII



Lisianthus F1 Arena Series

Arena is a new series featuring large and very double flowers on strong, sturdy stems. Arena exhibits less sensitivity to short stem length under long-day conditions and appears less sensitive to rosetting in plug cultivation. The series consists of 5 colors: Green (Group I), White (Group II), Pink (Group III), Yellow (Group III) and Rose (Group IV).

Lisianthus F1 Vulcan Series

Among the desirable characteristics of the new F1 Vulcan series are large cup-shaped flowers and strong stems. Flowers have thick petals so they hold up well when shipped. Vulcan also has better top flowering when compared to other varieties. The series consists of the 3 colors: Pink Picotee, White and Yellow (all Group II).



Stock 'White Wonder Improved'

'White Wonder Improved' is an extra-early, bright-green leaved variety that produces well-formed spikes. Its stem strength and flower shape have been improved. Stem length is 24-32 inches/60-80 cm.

Aster cordifolius ‘Avondale’

Do you have a shady corner of your field that needs a crop? Aster ‘Avondale’ is a shade native that tolerates up to a half day of sun, so it is a great choice for a spot partly shaded by trees or buildings. Long upright stems reach 24-30 inches with hundreds of pale blue flowers in early fall. Great as a filler with its soft texture and neutral color! ‘Avondale’ is a quick grower and a long-lived perennial. Zones 3-8.



Echinacea ‘Pink Double Delight’ PPAF

‘Pink Double Delight’ is a vegetatively-propagated selection that is very free flowering. Flowers are consistently double and the stems are sturdy and numerous. ‘Pink Double Delight’ is shorter than ‘Razzmatazz’ and ‘Double Decker’ and blooms sooner, with double flowers from the first one. Flowers from July to September and reblooms with cutting. Zones 5-9. Height 24-30".



Rudbeckia subtomentosa ‘Henry Eilers’

This North American native has undeniable potential as a cut flower with its unique appearance, sturdy straight stems and long vase life. Basal leaves appear in early spring and flowering stalks begin their ascent in June, reaching 5 to 6 feet and full flower by August, often staying in bloom into September. ‘Henry Eilers’ has finely quilled flowers of true yellow, not gold, and adds a whimsical touch to arrangements. The leaves of *Rudbeckia subtomentosa* are sweetly scented with a subtle vanilla fragrance. Zones 5-8.



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OR Hybrid 'Crystal Blanca'

This extremely reliable white Oriental has replaced 'Casa Blanca' in most all markets. 'Crystal Blanca' has by far the best stem strength and bloom quality of any white Oriental.



LA Hybrid 'Eyeliner'

Talk about new & unique, this is a MUST TRY. Eyeliner has a cherry-red lipstick edge and produces plenty of flowers in the smaller sizes. You might be the first one introducing this in your market.

AS Hybrid 'Latin Red'

We have been awaiting a good red replacement for 'Monte-Negro' and 'Latin Red' might be up to the task. A great true red color with enough flowers, producing 5-7 days faster than most AS+LA varieties.



OR Hybrid 'Mondriaan'

Special and unique tricolor flower—this variety is a MUST HAVE in your color selection. 'Mondriaan' is upward facing with a very strong stem and very usable for summer production.



LA Hybrid ‘Serrada’

This new LA hybrid has a nice deep yellow color with average flower size. ‘Serrada’ has a great flower presentation and strong vase life, so it is a safe variety to produce throughout the year.



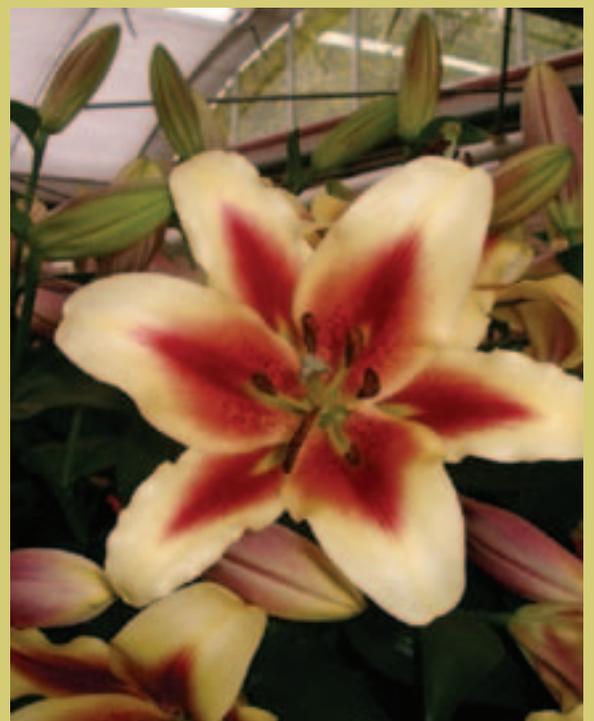
OT Hybrid ‘Valparaiso’

Variety has very big flowers and huge up-facing buds. ‘Valparaiso’ is an easy variety for handling and very easy to grow. Strong yellow color and will force in 95 days.



OT Hybrid ‘Shocking’

Absolutely shocking because of its color. No similar variety with this kind of contrast is on the market. Even though it is an OT hybrid, the appearance is more like an Oriental flower stem.



Echinops bannaticus 'Star Frost'

Dramatic, bold and architectural are words that have often been used to describe the commanding features of globe thistles. Echinops are highly regarded for their spherical prickly blooms and broad, thistle-like, but not so imposing, foliage. Jelitto's 'Blue Glow' and 'Arctic Glow' are select, highly regarded seed strains. Besides decorative cut flowers and distinct ornamental value, they are easy to grow in average soils in full sun and are cold hardy to zone 3. 'Star Frost' is a significant, white-flowering new Jelitto seed strain that has taken over ten years to bring to market. It is slightly shorter than *E. bannaticus* 'Blue Glow', with a profusion of golf-ball sized, pure white blooms—more plentiful than the species—that make lovely cut flowers.



Eryngium leavenworthii

This wonderful cut flower has wow factor. Standing about 2 feet high, this annual eryngium has stiff, highly colored bracts—silver and purple—that work in fresh or dried arrangements. The seed takes a period of warm, and then cold to germinate, so it is best begun as a crop in late summer. Natural flowering time is July-September.

Gaura lindheimeri
'Summer Breeze'

Who could have imagined twenty years ago that Lindheimer's bee blossom would be the phenomenally successful perennial that it is today? But a wild species, carrying a billowing cloud of white blooms, over a very long flowering season, was bound to catch the attention of every gardener. The current Royal Horticultural Society's *Plant Finder* lists over 25 different selections. We've paid attention to this phenomenon but have previously noted *Gaura lindheimeri*'s questionable hardiness. Yes, it is a perennial hardy to Zone 6, native to small area in east Texas and Louisiana, but it has been tricky sometimes to get it through cold winters in the garden and, especially when small or in containers. Christian Kress of Sarastro Nursery in Austria selected a robust, hardier but sterile *Gaura* and work was begun at Jelitto to use this as the basis for breeding a reliable hardy seed strain. 'Summer Breeze' has impressed us on several fronts. It appears to be more cold hardy and better able to handle overwintering in containers after several years on trial. Plus, it is a considerably more robust plant growing to an impressive size of 150 cm (59") tall and spreading to 160 cm (63") within 3 years. Slender, sturdy wands with pink buds open into white fluttering blooms in July and continue non-stop until frost. 'Summer Breeze' will flower the first year from seed and grows up to 80 cm (32") this first season. This *Gaura* lives up to the Greek origin of the name *gauros* (superb).





Rudbeckia grandiflora 'Sundance'

Just when you thought you had seen the last, and the best, of the black-eyed Susans, along comes another excellent one. *Rudbeckia grandiflora* is a not-so-common, drought-resistant species of black-eyed Susan that grows in a few scattered sites around the southeastern, midwestern and central United States. It is an elegant species with oblong basal leaves and a narrow, upright habit, featuring prominent parasols of golden yellow with tall brown cones. 'Sundance' is Jelitto's select seed strain. A side-by-side comparison between a few black-eyed Susans might be useful since this species is so little known. 'Goldsturm' is round, medium-sized, solid and remains the clear champion of mass plantings. *Rudbeckia laciniata* is very tall and has extra large flowers with very good cut-leaf foliage. *Rudbeckia grandiflora*

'Sundance' is long and lean and represents the best qualities of both. 'Sundance' will work in any border and is a stylish, new selection that can be planted as an accent plant or in smaller groups together with *Echinacea* 'Magnus' and *Andropogon* 'Prairie Blues'. 'Sundance' is sturdier than the species with strong flowering stems to 120 cm (48") that have fewer stem leaves, allowing the lovely, big blooms to stand majestically above the basal foliage below. Dozens of long, slender stems each yield a single flower and make this a worthy cut flower candidate, too. Cold hardy to Zone 4.



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Dahlia ‘Karma Chocolate’

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Dahlia ‘Karma Royal’

Dark red, new color now available as a virus-indexed cutting, strong uniform stems, long flowering period, high productivity.



Lisianthus Advantage Series

Colors: Yellow, Green, Purple, and Cherry Sorbet. Group 2, summer-flowering improved Super Magics. Compare to ABCs and Mariachi series. Stronger stems, more double flowered, and uniform series.

Sweet Pea Winter Sunshine Series

Exciting new premium cut sweet pea series. Stronger, longer stems, clearer colors, more uniformity, with more flowers. Fragrant. The earliest flowering cut strain available. Excellent resistance to bud drop. Colors: Lavender, Light Pink, Rose, White.



***Panicum elegans* ‘Frosted Explosion’**

Exciting new ornamental grass bouquet filler. High germination, good uniformity, and high production rate per plant. Field or greenhouse production.



Aster Idyll Mix

We trialed this new 'needle type' aster this past summer at Harris Seeds, and were so impressed with the quality of plant, stem and bloom. Growers can expect strong, 28-30" well-branched plants that produce multiple stems and large 5" flowers composed of attractive quilled petals. Once cut, the 25" stems are long lasting and provide good vase life. A formula mix of cream, pink, rose, red, lavender and dark lilac.

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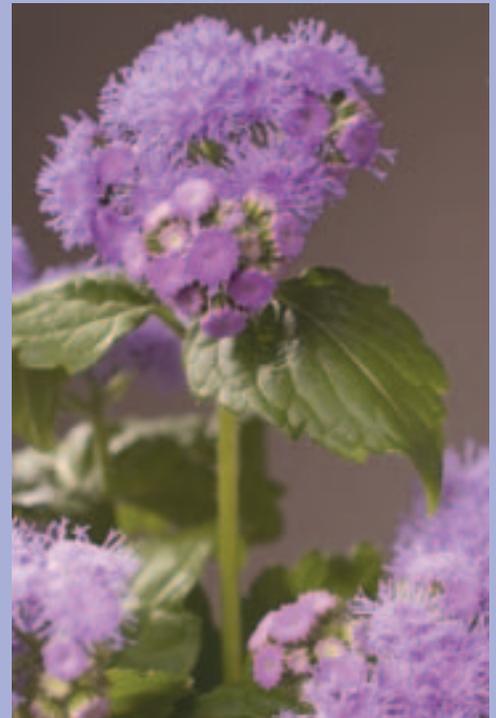


Achillea millefolium
'Flowerburst Red Shades'

Mainly red shades ranging to violet. Habit like 'Summer Pastels' with 30" stems. Excellent for containers, borders and cutting.

Ageratum **'Blue Planet'**

Straight, 20" basal branching stems bearing flower clusters on top. Best substitute when 'Blue Horizon' is in short supply.



Ornamental pepper
Cappa Series

Base branching, cut flower type. Quick setting. Three to seven strong, wiry single stems set loads of high colored fruit. Long shelf life. Colors: 'Topfruit Red' (conical fruit set in terminal cluster cream to orange to red); 'Round Red' (round oval fruit set in sprays green to red); 'Conic WhiteRed' (fruit set in sprays white to orange to red).

Amaranthus cruentus
'Autumn's Touch'

Pistachio and cream tipped with bronze, broad 3' spikes over deep green foliage. Long-lasting cut flowers, easy field-grown specialty item.



Dianthus **Fandango Series**

Fragrant double flowers on 18" stems. Strong upright stems stand well in landscape and for cut flower use.



Scabiosa atropurpurea
'Black Knight'

Strong 30" stems . Exotic black flowers tipped with white pin dot stigmas. Excellent field-grown cut flower.



Eryngium leavenworthii **'Purple Sheen'**

Annual eryngium with fewer and softer spines. Flower, stems and bracts develop to a vibrant metallic purple in late summer. Wiry stems are well suited to drying.



Helianthus **'Peach Passion'**

Pollenless cultivar in a unique peach color. Broad petals with green-gold disc on 3-4" flowers.



Helianthus
'Double Quick Orange'

Orange double flowers, 5" sunburst with distinct green disc. Single-stemmed, pollenless. Matures in 65 days, early for a double.



John Dole, North Carolina State University

The cliché states that everything comes full circle and the flower industry is no different. Early cut flower production in the U.S. and Canada started with people harvesting out of their gardens and fields. With the development of greenhouses, cut flower production increasingly moved indoors. As production of the major cut flowers moved to Colombia and other Central and South American countries, field production of cut flowers in North America was renewed. Now, many of the same people who relied on field production are looking to greenhouses and hoopouses, some of which are unheated or minimally heated, to expand their season and their production. Many ASCFG trialers, both commercial and university, now grow some or all of the trial cultivars in hoopouses. In particular, two universities have been doing a lot of work using hoopouses and have provided great information: Chris Wien at Cornell, who brings a much-appreciated northern perspective, and Laurie Hodges at the University of Nebraska, who many of you know from her insightful comments on the Bulletin Board. Check out the comments sections for their information and look for the start of a series of reports from Chris

in this issue of *The Cut Flower Quarterly*. Unfortunately, we do not have the hoopouse or greenhouse comments separated out; that is something we will try to do in the future.

So, why do I bring up hoopouses/greenhouses? Most of the cultivars in the trials this year lend themselves very well to hoopouse production. Lisianthus, stock, kale, and snapdragons, in particular, do very well in hoopouses or greenhouses, usually getting much taller stems than outdoors. We confirmed that fact in our trials as we grew the lisianthus cultivars in the greenhouse and in the field and had longer stems and larger flowers in the greenhouse. You may want to keep this in mind if you have been thinking about putting one of these structures.

Continuing our discussion about lisianthus, this year certainly was a banner year with a broad range of beautiful and interesting cultivars. The days when lisianthus was a simple, single-flowered plant in purple, pink and white are long gone. Most striking were the spray-flowered Fiorettis and the brown-hued Wonderous, both from Sakata Seed America. The Fioretti cultivars produced a multitude of small, perfectly-shaped single flowers on a spray. 'Fioretti White'

was noted for its pure white petals and 'Fioretti Yellow' for its pale yellow petals. 'Wonderous Purple' and 'Light Brown' also had smaller-than-typical flowers, but these cultivars had thick, richly colored petals, the backs of which were brown hued. 'Light Brown' was actually more of a peachy-pink color. Both Fioretti and Wonderous plants, unfortunately, were shorter, up to 2 feet tall for some trialers, and slower growing than typical lisianthus. However, the postharvest life of both series was excellent, over 14 days, in the NCSU tests, and respondents also noted a long vase life. The real question, of course, is the market. These lisianthus are probably best suited to lisianthus connoisseurs – those producers who know how to grow lisianthus and have a well-developed market for them, such as upscale florists and farmers' markets. Several respondents also commented that the Fioretti series was excellent for wedding work.

For the more mainstream lisianthus markets were the ABC cultivars from PanAmerican/Ball and 'Mariachi Carmine' from Sakata Seed America. The ABC series is well liked for its reliability and durability both in the field and the greenhouse. 'ABC 1-3 White'





scored high enough to be nominated for ASCFG Cut Flower of the Year. One trialer summed it up as follows: “Beautiful snowy white, strong stem and good stem length, productive”. ‘Mariachi Carmine’ also scored very well and was nominated for ASCFG Cut Flower of the Year. People loved its wonderful color. In the words of one trialer: “A favorite! The dark, dark pink double blooms were a real head turner in the trial, long-lasting and showy.”

Intermediate in the marketing approach would be the Ruffles series from Sakata. These cultivars produced large flowers with ruffled petals. Although one respondent noted that the ruffled petals made the flowers appear double, others noted that as with other single lisianthus, they did not sell as well as the doubles. Plants were productive and uniform.

Stock is another species with excellent potential for hoophouses. Outdoor stock production is limited to those areas with temperatures cold enough to prompt flower initiation and high quality stems but not so cold as to damage plants, which usually means no colder than light to moderate freezes. Thus, most commercial production has been from coastal California, although some areas of the southeastern United States can also produce high quality stock in the winter. This year’s trial featured the Katz series from PanAmerican/Ball, notable in that it

can initiate flowers at relatively high temperatures, eliminating the cold treatments necessary for most stock cultivars. This feature makes it suitable for greenhouse and season-extending hoophouse production.

These stock can be planted in the fall and will flower more quickly without the need for a winter vernalization. Hoophouses can be used to protect plants from the worst cold weather that can damage plants. Plant quality is best under cool temperatures but can grow well under warmer temperatures. A number of colors are available from white to bright pink. Stems averaged 15 to 17 inches long, with some trialers getting two foot long stems. As with most colored stocks, each cultivar is actually a mixture of singles and doubles, with about 60% doubles. One final comment: the name of the series was first listed as Mambo by PanAmerican/Ball Seed. Later they changed it to Katz to honor Philip Katz, who passed away in 2004. Philip worked for PanAmerican Seed for many years and was one of the most knowledgeable cut flower specialists around. He was also remembered by many of us as one of the nicest, most sincere people we have every known and we are glad he is being so honored.

Cut kale is one of the plants that remind us that the term ‘specialty cut flowers’ is often a misnomer. We grow kale for its large rosettes of colorful

foliage. The cultivar in this year’s trial, ‘Pink Crane’ from Takii Seed, scored very well, earning it a nomination for ASCFG Cut Flower of the Year. One of the issues with producing cut kale is getting the stems long enough. One trialer summed it up well: “Close spacing and mesh are needed”. Another trialer mentioned the repeated removal of the lower leaves. Some of the best and tallest crops I have seen have been grown in hoophouses. Certainly one of the trialers has figured out how to grow kale as he reported 36-inch stems. To put that in perspective, however, another trialer reported 2-inch stems. Not sure this is a selling point or not, but in Europe cut kale dyed and painted various unearthly colors appears to be quite popular.

The two snapdragons in the trial this year represent the two flower types – closed (or regular) snaps and open face (or butterfly) snaps. The latter have had a difficult time finding a place in the market as most people want the regular snaps when they order snapdragons. One company has had success referring to the open-faced types by their cultivar name and not telling people they are snapdragons. The ‘Chantilly Dark Orange’ from Takii Seed is a beauty, with long spikes of open-faced cinnamon orange flowers. The average production yield was approximately 5 stems/plant, which were 22 inches long. However, at least one respondent reported stems over



50 inches long. ‘Animation Cognac’ from Benary Seed, represented the standard snapdragon flower shape. Its color combination of pastel pink and yellow also received rave reviews. Trialers report an average of 6.8 stems per plant and 20+ inch stem lengths. At least one trialer had 45-inch long stems.

Larkspurs are often rather difficult to evaluate in the ASCFG trial. To do them justice, southern growers should sow the seed in the fall to allow for overwintering, which produces long, full-flowered stems. Unfortunately, we are not able to get the seed in time to send out in the fall. However, the larkspur cultivars in the trial still performed quite well for many growers, especially those in the North. Of the four cultivars of Cannes submitted by Takii Seed, ‘Purple Picotee’ did well enough for growers to be submitted for ASCFG Cut Flower of the Year. One trialer stated that it had “Strong plants that produced blooms over a long period.” Although larkspur usually is not considered a greenhouse crop, at least one trialer had success, noting that “My customers love them, they transplanted well and did very well in the greenhouse, no disease problems, sold every stem.” Stem length averaged 26 inches, with 42 inches the longest produced.

Nothing illustrates the specialty in “specialty cut flowers” quite like peppers. For some, peppers are a hassle with their short stems, harvest timing, and foliage that often wilts very quickly and must be removed by hand. For others, the bright colorful fruit are fun, interesting, and a fall staple. Of the three cultivars submitted by Kieft-Pro-Seeds, ‘Cappa Conic White/Red’ and ‘Cappa Topfruit White/Red’ appear to be received most favorably. ‘Topfruit’ was noted by some as being the earliest of the group to harvest. Many trialers loved the bright combination of colors on the ripe and immature fruit. As is typical for most pepper varieties, stems were rather short, averaging 16 to 18 inches long, but as much as 3 feet long for a few. We tested the postharvest life of ‘Topfruit’ and noted a vase life of 14 to 18 days. The foliage did not last but wilted and dropped quickly,



indicating that as with other peppers the stems should be stripped of foliage.

Sunflowers are an important species for specialty cut flower growers and thus, an annual topic in this report. This year two cultivars were included: ‘Orange Glory’ and ‘Tosca’, both with orange petals and dark centers. Both cultivars performed well, with ‘Orange Glory’ doing slightly better in the ratings, enough so that it was nominated for the ASCFG Cut Flower of the Year. The challenge for sunflower breeders is that so many excellent varieties are available with the classic orange petals and dark center that it is now difficult for a new cultivar to break into the market. Both cultivars were well received but will have much competition in the marketplace. Chris Wein noted that both cultivars were very daylength sensitive as short days produced faster flowering but much shorter stems. This should be considered if using either cultivar for season extension in the spring or fall in hoopouses. Timing is difficult to determine from reports because everyone’s conditions vary, but at least one report indicated that ‘Orange Glory’ flowered after ‘Pro Cut Orange’ and another that ‘Tosca’ flowered earlier than ‘Orange Glory’ and ‘Sunrich Orange’, the latter two flowering at the same time. Similarly, Chris noted that in upstate

New York under long days of summer, ‘Pro Cut Orange’ flowered in 62 days, ‘Tosca’ in 68 days, ‘Orange Glory’ in 73 days and ‘Sunrich Orange’ in 74 days.

One comment you will see in the report about a number of cultivars that are cold hardy is “We will see what happens to it next year”. Unfortunately, we track seed trial plants only one year. However, occasionally, we get comments from trialers about previous cultivars. Jim Mercer of Sheepscot Flower Farm (Zone 5) sent these comments about *Eryngium* ‘Blue Glitter’ from the 2006 trial: “Nice color and unusual shape. Nice in bouquets or alone. Easy to grow and hardy in our heavy clay and cold climate. Bloomed early and we got a second flush of blooms in the fall. It did bloom the first year despite late planting, but stems were short and it did not have time to mature.” He also noted that it had a 2-week vase life using plain water and, unfortunately, an unpleasant scent. He gave it ratings of 5 and it averaged 4 stems/plant and 22 inches long.

Overall, we had 35 cultivars from seven companies, up a bit in number of cultivars from last year. Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year. The rankings are based on the combined ratings score: market appreciation (average of wholesale, florist, and consumer) + repeat again + ease of cultivation for those cultivars where more than three trialers responded. Thus, from the 2007 trials kale ‘Pink Crane’, larkspur ‘Cannes Purple Picotee’, lisianthus ‘ABC 1-3 White’, lisianthus ‘Mariachi Carmine’ and sunflower ‘Orange Glory’ are nominated as Cut Flowers of the Year and will join other nominations from ASCFG members.

Interpreting the trial results: The numbers reported are averages of all the respondents and many factors will affect the success of any plant species. Our participants are growing and harvesting the trial plants in a wide variety of ways. After looking at the average, check the range of responses listed below each

number to see how the cultivar performed at its best and its worst. If the range of responses in the ratings is narrow and high, i.e., 3-5 or 4-5, the plant was a winner for most of the respondents and is likely to do well for you. The Repeat Again Rating is particularly important because it indicates if the trialer would take the time, money, and space to actually grow the cultivar again. Review the trial results carefully. If a cultivar sounds interesting but did not appear to do well, try it anyway. The cultivar may work well for you.

Acknowledgments: A hearty thank you to all of the evaluators who returned their trial reports and to the seed companies for providing such great cultivars. Congratulations to Laurie Hodges and Barbara Murphy for being the first trialers to return their evaluations. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials, Tina Krug, Emma Locke, Erin Possiel, Erin Regan, Diane Mays, Brad Holland, and Tim Ketchie for assisting with the NCSU trials, and Nick Corby for laboriously typing in the comments of several trialers. In preparing the report I have edited the participants' comments for space and clarity; my apologies if I've altered the tone or content of anyone's comments. In a few cases we could not determine what was written.

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www.benary.com

Fred C. Gloeckner & Co.

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

Goldsmith Seeds

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

Kieft-Pro-Seeds

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

PanAmerican/Ball

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

Sakata Seed America

18095 Serene Drive
Morgan Hill, CA 95037
www.sakata.com

Participating Growers

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Kate Van Ummersen
Sterling Flowers
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Cheryl Wagner
Wagner's Homestead
Farms
Belleville, MI

Chris Wien
Dept. of Horticulture
Cornell University
Ithaca, NY

Tom Wikstom
Happy Trowels Farm
Ogden, UT

Alison Wiley
Littleflowers
Newfield, NY

2007 ASCFG Seed Trial Results. The first row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed, either only one person responded for that category or several responded and all gave the same rating.

| Cultivar Company | Yield (Stems/plant) | Stem Length (inches) | Market appreciation rating ¹ | | | Repeat again rating ¹ | Ease of cultivation rating ¹ | Average spacing (in. ² /plant) | Average postharvest life (days) |
|--|-------------------------|----------------------------|---|-------------------|-------------------|--|---|---|---------------------------------------|
| | | | Wholesale | Retail | Consumer | | | | |
| Delphinium 'Aurora White' American Takii | 1.9 0.11-5 | 21.5 8-36 | 4.3 3-5 | 4.3 3-5 | 4.1 3-5 | 3.8 2-5 | 3.8 3-5 | 109 25-192 | 10.4 1-14 |
| Dianthus 'Bouquet Rose' PanAmerican/Ball Seed | 10.8 1.5-27.5 | 14.2 8.5-27 | 4.0 4 | 3.7 1-5 | 3.5 2-5 | 3.3 1-5 | 4.4 3-5 | 86 36-144 | 9.5 7-14 |
| Dianthus 'Fandango Crimson' Goldsmith Seeds | 9.4 1.5-1 | 12.0 9-15 | 2.7 1-4 | 2.7 1-5 | 3.6 1-4 | 2.3 1-4 | 4.2 2-5 | 80 36-144 | 8.8 7-12 |
| Kale 'Pink Crane' American Takii | 1.0 0.89-1 | 19.3 2-36 | 4.0 4-5 | 3.5 3-4 | 4.2 3-5 | 4.5 3-5 | 4.3 3-5 | 76 36-144 | 12.6 7-17 |
| Larkspur 'Cannes Crystal Pink' American Takii | 3.3 1-12.5 | 25.8 14.5-42 | 4.0 4.0 | 3.5 3-4 | 3.4 2-4 | 3.3 1-5 | 3.6 2-5 | 66 4-144 | 6.5 5.5-8.5 |
| Larkspur 'Cannes Deep Blue' American Takii | 2.8 0.5-12.5 | 26.2 16-36 | - - | 3.0 3 | 3.8 1-5 | 3.7 1-5 | 3.5 1-5 | 77 36-144 | 6.8 6-7 |
| Larkspur 'Cannes Purple Picotee' American Takii | 3.7 1-12.5 | 26.0 10-42 | - - | 4.5 4-5 | 3.9 3-5 | 4.3 3-5 | 3.7 3-5 | 85 36-216 | 7.8 6-12 |
| Larkspur 'Cannes Rose Stripe' American Takii | 3.4 0.5-12.5 | 25.3 18-42 | 4.0 4.0 | 4.0 3-5 | 3.7 2-5 | 4.0 3-5 | 3.7 2-5 | 76 36-144 | 6.9 4.5-8.5 |
| Lisianthus 'ABC White GX12444' PanAmerican/Ball Seed | 2.8 2-6.2 | 18.8 14-22 | - - | - - | 3.5 2-4 | 3.3 1-5 | 3.2 1-5 | 65 16-144 | 14.0 14 |
| Lisianthus 'ABC 1-3 White' PanAmerican/Ball Seed | 4.5 0.88-6.4 | 18.3 15.5-25.5 | 5.0 5.0 | 5.0 4-5 | 4.4 4-5 | 3.9 1-5 | 3.6 1-5 | 92 16-144 | 12.0 8-14 |
| Lisianthus 'ABC 2-3 Green' PanAmerican/Ball Seed | 3.8 3-6.6 | 20.5 12-32 | 4.0 4.0 | 4.3 5-4 | 4.4 4-5 | 3.7 2-5 | 3.6 2-5 | 84 16-121 | 12.0 8-14 |
| Lisianthus 'ABC Lavender' PanAmerican/Ball Seed | 3.8 1-8 | 21.7 13-29 | 5.0 5.0 | 4.7 5.0 | 4.5 4-5 | 3.7 1-5 | 3.6 1-5 | 64 16-121 | 11.6 7-14 |
| Lisianthus 'Fioretti Green' Sakata Seed | 2.5 1-5.7 | 16.7 11-22 | 3.0 3 | 4.0 3-5 | 3.6 3-4 | 3.4 1-5 | 3.5 1-5 | 48 16-121 | 11.0 8-14 |
| Lisianthus 'Fioretti White' Sakata Seed | 2.6 0.6-5.1 | 18.8 11-28 | 1.0 1 | 3.3 1-5 | 3.3 1-4 | 3.0 1-4 | 3.5 1-5 | 39 16-81 | 14.0 14 |
| Lisianthus 'Fioretti Yellow' Sakata Seed | 3.0 1-6.2 | 16.5 11-22 | - - | 4.0 4 | 3.3 2-4 | 3.1 1-5 | 3.2 1-5 | 42 16-81 | 13.7 13-14 |

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

| Company/Cultivar | Yield (Stems/plant) | Stem Length (inches) | Market appreciation rating ¹ | | | Repeat again rating ¹ | Ease of cultivation rating ¹ | Average spacing (in. ² /plant) | Average postharvest life (days) |
|---|------------------------|----------------------------|---|-------------------|-------------------|--|---|---|---------------------------------------|
| | | | Wholesale | Retail | Consumer | | | | |
| Lisianthus 'Mariachi Carmine' Sakata Seed | 3.1 1-7 | 19.7 12-27 | 4.0 4.0 | 5.0 5.0 | 4.8 3-5 | 4.2 3-5 | 3.5 3-5 | 48 16-121 | 12.1 7.5-14 |
| Lisianthus 'Ruffle Blue' Sakata Seed | 3.1 1-8.7 | 18.1 14-28 | - - | 2.5 2-3 | 3.4 2-5 | 2.8 1-5 | 3.3 1-5 | 67 16-216 | 13.3 12-14 |
| Lisianthus 'Ruffle Green' Sakata Seed | 2.7 1-6.8 | 18.3 11-27 | - - | 3.0 3.0 | 3.4 2-5 | 3.0 1-5 | 3.3 1-5 | 76 16-216 | 13.3 12-14 |
| Lisianthus 'Ruffles Yellow' Sakata Seed | 2.8 0.7-6.4 | 19.5 11-30 | 3.0 3.0 | 3.0 3.0 | 3.3 2-5 | 2.6 1-5 | 3.5 1-5 | 66 16-216 | 13.3 12-14 |
| Lisianthus 'Wonderous Light Brown' Sakata Seed | 2.8 2-5.9 | 20.6 14-30 | - - | 5.0 5.0 | 2.9 1-5 | 3.4 1-5 | 3.4 1-5 | 39 16-81 | 9.3 1-14 |
| Lisianthus 'Wonderous Purple' Sakata Seed | 3.5 1.5-9.7 | 20.9 12-34 | - - | 4.0 4.0 | 2.7 2-3 | 1.8 1-3 | 3.1 1-5 | 48 16-121 | 13.5 13-14 |
| Pepper 'Cappa Conic White/Red' Kieft-Pro-Seeds | 4.1 1-9 | 18.5 11-34 | 3.7 3-4 | 2.5 1-3 | 3.7 2-5 | 3.6 2-5 | 4.1 3-5 | 139 36-360 | 12.1 1-21 |
| Pepper 'Cappa Round Red' Kieft-Pro-Seeds | 3.2 1-4.6 | 17.2 11-32 | - - | 3.0 3.0 | 3.4 2-5 | 3.3 2-5 | 4.4 4-5 | 122 36-216 | 12.6 7-21 |
| Pepper 'Cappa Topfruit White/Red' Kieft-Pro-Seeds | 4.4 1-7.5 | 16.7 11-22 | 3.7 3-4 | 3.4 2-5 | 3.5 1-5 | 3.4 1-5 | 3.8 1-5 | 128 36-360 | 15.2 14-21 |
| Snapdragon 'Animation Cognac' Benary | 6.8 1-11 | 20.9 11-45 | 2.7 1-5 | 3.1 2-5 | 4.0 2-5 | 3.6 1-5 | 4.0 2-5 | 81 36-144 | 8.3 7-12 |
| Snapdragon 'Chantilly Dark Orange' American Takii | 5.3 1-12 | 22.3 12-51 | 2.0 2.0 | 3.3 2-5 | 3.5 1-5 | 3.3 1-5 | 4.0 2-5 | 79 9-216 | 9.2 6-17 |
| Stock 'Katz Cherry Blossom' PanAmerican/Ball Seed | 1.1 0.6-2.5 | 16.7 13-22 | 4.0 4.0 | - - | 4.1 3-5 | 3.4 1-5 | 3.9 3-5 | 65 16-170 | 8.1 6-12 |
| Stock 'Katz Lavender Light' PanAmerican/Ball Seed | 1.2 0.5-4 | 15.1 9-22 | 1.0 1.0 | 1.5 1-2 | 3.7 1-5 | 2.5 1-5 | 3.4 1-4 | 74 36-192 | 9.7 6-12 |
| Stock 'Katz Pink' PanAmerican/Ball Seed | 2.6 0.5-12 | 17.3 14-22 | 4.0 4.0 | - - | 4.0 3-5 | 3.4 1-5 | 3.8 3-4 | 60 16-144 | 6.9 6-12 |
| Stock 'Katz White' PanAmerican/Ball Seed | 1.3 0.5-4 | 16.9 14-22 | - - | 2.0 2 | 4.1 3-5 | 2.9 1-5 | 3.4 2-5 | 61.7 16-144 | 9.0 6-12 |
| Sunflower 'Orange Glory' Fred C. Glockener | 1.0 1.0 | 42.3 18.5-72 | 3.8 3-4 | 4.3 3-5 | 4.1 3-5 | 3.6 1-5 | 4.8 4-5 | 87 16-216 | 6.4 1-12 |
| Sunflower 'Tosca' Fred C. Glockener | 1.0 1.0 | 40.7 15.5-72 | 3.4 2-4 | 3.6 3-5 | 3.9 3-5 | 3.4 2-5 | 4.6 4-5 | 88 4-216 | 8.8 7-12 |

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

Summary of Comments

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

Delphinium

'Aurora White' (American Takii)

Good qualities: Gorgeous flower (2), just like the other 'Aurora' colors; Strong seedlings; Nice stem length; We grew this one in the greenhouse and we had delphinium until the end of July (Zone 6b), it was absolutely fabulous, even with the shorter side shoots, the florists loved it, I have already ordered more for this year and ordered different colors; Time will tell!; Very attractive flowers/spike; Very reliable, uniform habit, flowers first year; Though not normally as marketable, the smaller side shoots proved quite useful in our desktop/mini bouquets; Beautiful, large flowers, stems good and strong but not too large; Nice, clean white color, small stems the first blooming time make for ease of using in bouquets; The white flower color transitioned to a lovely pale blue with age; Pretty, easy to grow.

Problems: Short (2); None; Never have had any success with getting tall, useable delphiniums from seed their first year. They languished all season until fall, then they started to look promising (maybe) for next year; Died in field as a transplant; Not very drought tolerant; As a whole, the blooming stems were quite beautiful but they were sort of on the grey side, rather than a true clear white.

Similar cultivars: Large flowers similar to 'Guardian Blue' style.

Additional comments: I got no blooms on any of my first-year delphinium this year, we were pelted with weeks of non-stop rain, then a long dry period, and I am grateful they survived at all, plants are healthy, just not creating flowering stems; I planted in hoophouse and so followed with another crop, next year I will see if I can get more stems by planting some outside; I got good germination from this cultivar, but they did not transplant to the field well, what few survived were eaten by rabbits this season, no stems were harvested; It does pay for us to grow delphinium in the greenhouse with



low heat in the winter or early spring, we get several cuttings off each plant and my customers just love it, I thought the Aurora had stronger stems than the Pacific Giants and we had no problems at all; Hot weather limited further cuts, planted too late for zone 8b in south; 'Aurora White' was about average in terms of mildew resistance; White is not a popular color, we sell lots of purple and medium to dark blue stocks, will try the Aurora series in some of these colors; Second year will bring more blooms and if cut back in the spring, after flowering, it will bloom again for us in the fall.

Dianthus

'Bouquet Rose' (PanAmerican/Ball Seed)

Good qualities: Great color (4); Great bouquet/filler cut, matures at one time so a quick single cut is achieved; Strong stems; Robust plants, handled cool temps beautifully and made a strong comeback (after shearing) in fall, lightly blooming still (as of mid-Nov!), sweet appearance; Healthy plants, I like the 'Rose Magic' multi-pink look; The flower heads were nice and full, making for an attractive plant and useful blooms, long bloom time in the field; Easy to germinate, produce transplants, and transplant to field, some may think the 3 shades of pink from light pink to dark pink florets in the flower to be unique but I personally did not care for it; Interesting colors, blended well with the 'Amazon Duo'; This turned out to be a great variety, lots of stems and tall; Ten to twelve flower heads per plant; This is the first spray dianthus I have tried that is as vigorous as 'Bouquet Purple', it is nice to have another color to add to the mix; Full flower heads, nice change of color, full plants.

Problems: Too short (6); I have every reason to believe it will be much taller and useful next year, disappointed that it did not have more fragrance; It is too pale for my tastes; Customers, so-so; I grew this cultivar directly next to 'Bouquet Purple' and the Neon series. In addition to the different color florets being undesirable the plant flowered slightly shorter than 'Bouquet Purple' with smaller flower heads. My crop did not look anything like the flowers on display at the booth in the ASCFG trade show. Thus, I must have had less than optimal conditions for this cultivar to perform to its potential; Both dianthus in trial developed black spots on stems and leaves, poor quality, while dianthus 'Amazon' in same row produced excellent cuts; I like having another choice of color, but this was too pasty for many of my customers; I have grown this cultivar for a couple of seasons but when I have it blooming along with 'Amazon Neon' or 'Bouquet Purple' I tend to leave this variety in the field, the stems are shorter and they actually end up looking washed out instead of having a bicolor effect, I may not continue growing it.

Similar cultivars: Kind of like 'Rose Magic' but less rigid stems and more productive stem count; 'Bouquet Purple' and 'Amazon Rose Magic'.

Additional comments: I am going to try to overwinter to see if larger stems result; I would be willing to try this one again and see if I can grow it and get results like the those that were displayed; My customers loved this one, we had it for Mothers Day and it sold like crazy; As with most dianthus, there were many additional stems that were too short for my purposes, it blooms over a long period, which may have value in the bedding market.

Postharvest handling: Florlife was used, I always bring flowers in out of the heat after being cut. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

Dianthus 'Fandango Crimson'

(Goldsmith Seeds)

Good qualities: Rich color (7); It was a heavy producer (2); Ten to twelve flower heads per plant; Easy to grow, pretty little flower; Flowers attractive, flush same time, no support needed; Nice stiff stems; Full plants; Easy to germinate and transplant; Strong healthy plants; Attractive blooms.

Problems: Very short stem length (6); However, for all of the cultivars I trialed, the stem length probably was compromised due to the fact we went 6 weeks without rain (June through mid July) and I couldn't keep up with

the watering; I was very pleased that the seeds sprouted and were growing, but upset that I could not keep them alive - the weather was unusually dry - I am not sure if that was the cause. I grew this cultivar next to and among other dianthus including 'Bouquet Purple' and the Neon series using the same culture for each, this cultivar has short stems and scarce florets on the flowering stalk, I gave up harvesting it as it was not useful even for my shortest-stemmed bouquets; I thought it would make a better bedding plant, started out very short but stretched out with time, still not as tall as the 'Bouquet Rose Magic' dianthus; Both dianthus in trial developed lots of black spots on stems and leaves, poor quality, dianthus 'Amazon' in same row produced excellent cuts; Not a suitable cut flower, two-tone color nice, would be a good garden/bedding plant.

Similar cultivars: 'Dianthus Bouquet', but not in colour.

Additional comments: Nice bedding plant; The Neons were outstanding, 'Bouquet Purple' was okay but not as good as some other years that I have grown it, 'Fandango Crimson' compared to either or both was not a good performer; This would be a sophisticated shade of red for Christmas décor; My customers did not like this color as much as the 'Bouquet Rose Magic'; Would make a nice garden addition and possibly an interesting container plant as it flowers the first year, but not one I'd choose as a cut flower.

Postharvest handling: See separate postharvest report in this issue for results from NC State University postharvest evaluations.



Dianthus 'Fandango Crimson'

Maine, customers generally commented on it but did not buy it; Has same pests as cabbage that need controlling throughout the growing season; Cabbage moths and flea beetles, BT took care of the cabbage moth larvae and the flea beetles came and went without any help; Correct timing is everything; None.

Similar cultivars: We tried the others in the Crane series a couple of years ago; The other Crane series of ornamental cabbage.

Additional comments: We would probably not use valuable greenhouse space again for this crop as it was not very profitable; For tall straight stems, close spacing and mesh are needed, but, if the top is pinched out, the stem will form several smaller flowers that are quite useful; 'Crane Pink' is a good addition to the series and useful in that it comes in earlier than others in the series giving flexibility in harvest for farmers' markets - ornamental kale was one the success stories of this year's trial - three other Crane series kale were used for comparison; This and all of our other brassicas are a lot of work, strong netting is mandatory, removing leaves as the crop grows is tiresome, we did it 8 times, next year I plan to start it later to save labor, 60 to 70 cm is plenty tall enough, we got 90 cm! We always have some runts that grow 20 cm tall and they are a great length and diameter for arrangements, this would be a great research project: planting at 3-week intervals to see how late we could go to save labor; Plants are just coloring up now due to exceptionally warm Sept/Oct. (Zone 5b).

Postharvest handling: Remove damaged/lower leaves to prevent water contamination; We used plain water; Flowering kale will last

at least a month in outdoor arrangements - warmer temperatures will cause the stems to smell like cabbage, since that is what they are!; Careful with food, tends to yellow older leaves; We cut in the field into hydrating solution, transfer to Chrysal #2 and put in the 34°F cooler until sold, may be weeks, when sold, we recut stems and deliver in water.

Larkspur

'Cannes Crystal Pink' (American Takii)

Good qualities: Attractive clear pink color (8); Good stem length, florets not shattering; No major insect damage, drought tolerant; Easy to grow; Excellent to dry, keeps color; Uniform size and harvest time; Grew well transplanted into tunnel in early spring, good color variety although customers did not appreciate as much as I thought they would, rapid bloom, full flower spikes, remained upright without support; Good germination, no pests; Full heads, strong stems.

Problems: Weak plants, susceptible to disease, flowering along the stem was not uniform; Not quite a big enough deal - blue sells better for me; None; I just can't seem to get larkspur to grow, a few seeds germinated but the plants didn't grow, I have tried any number of methods to get larkspur to grow, no luck; Too small to be profitable in bunches or bouquets; More disease issues than QIS mix grown next to it; First time growing larkspur in high tunnels, it eventually germinated in mid-April, rather erratically and after we'd given up hope, I transplanted young plants to consolidate space without any adverse effects on crop, we sold a couple of bunches but overall the stems were too short which I think was due to erratic germination, no pest or disease problems.

Similar cultivars: Not that we have grown; Similar color to 'Giant Imperial Pink' or 'Dark Pink Sublime'.

Additional comments: I cannot seed larkspur in the spring and get any length, I waited until this fall to seed with my other larkspur and will submit report next spring, 2008; Too small sample size for thorough evaluation; We started this very late so it didn't get a fair trial, I would plant it much earlier next year if we grow larkspur; Number of cuts were limited by late planting, planted both direct seeded and transplanted but no difference in harvest.

Postharvest handling: Plain water; Floralive. See separate postharvest report in this issue for results from NC State University postharvest evaluations.

Kale

'Crane Pink' (American Takii)

Good qualities: Easy to grow, something different for creative customers who like "different"; Beautiful shade of pink, nice addition to the series!; 'Crane Pink' "flowered" earlier compared to other Crane series, i.e., 'Crane White', 'Crane Red', and 'Crane Bicolor', the pink and red in the series tend to flower somewhat shorter than the white and bicolor, this seems to be caused by the white and bicolor growing more erect while the pink and red seem to have a crook at the base of the stem.

Problems: Very susceptible to flea beetle damage; Prone to cabbage loopers both early on and later at harvest time, was ready for harvest at the tail end of our market season in

‘Cannes Deep Blue’ (American Takii)

Good qualities: Stunning deep blue color (4); Drought tolerant, very tolerant of high saline water; This series is easier to grow than other larkspur I have tried and all three cultivars responded the same, the only difference was the color, the colors were wonderful with deep rich purple, rose (even with the stripe) and blue; Excellent to dry- keeps color; Early, good stem length; Grew well transplanted into tunnel in early spring, good color variety although customers did not appreciate as much as I thought they would; Full flower spikes, bloomed within 90 days from seeding, remained upright without support; A true blue is a thing to behold, our customers loved the color quality of this cultivar; Tons of blooms, very uniform.

Problems: The color was not appealing; Wilted quickly during harvesting if not immediately placed in water; Weak plants, susceptible to disease and petals spotted in the rain; Some seedling loss in the field but most survived and produced nice stems; Too small to be profitable in bouquets; More disease issues than QIS mix grown next to it; We experienced some shattering of lower blossoms if we just slightly delayed harvest; Lodged after a big rain but we did not provide support for the plants; First time growing larkspur in high tunnels, it eventually germinated in mid-April, rather erratically and after we’d given up hope, I transplanted young plants to consolidate space without any adverse effects on crop, we sold a couple of bunches but overall the stems were too short which I think was due to erratic germination, no pest or disease problems.

Similar cultivars: Planted the Cannes series next to two other mixtures that I have had moderate success with and these three cultivars outperformed my comparison larkspur - this was one of my successes in the variety trial this year along with the sunflowers and kale; ‘Dark Blue Sublime’.

Additional comments: Great for bouquets, added a nice quality, easy to break tips of flowers off in handling but typical of any cultivar and not unique to Cannes series; First to bloom of Cannes series; Late in the life cycle, we always get powdery mildew, but ‘Cannes Deep Blue’ seemed most resistant.

‘Cannes Purple Picotee’ (American Takii)

Good qualities: Great colour (7); Strong plants that produced blooms over a long period, when others in the field succumbed to disease, these continued producing well; Really pretty; This series is easier to grow than other larkspur I have tried and all three cultivars

responded the same, the only difference was the color, the colors were wonderful with deep rich purple, rose (even with the stripe) and blue; My customers love them, transplanted well and did very well in the greenhouse, no disease problems, sold every stem; Holds petals well, good height, Uniform size and harvest time; Grew well transplanted into tunnel in early spring, good color variety although customers did not appreciate as much as I thought they would; Rapid bloom, remained upright without support; Looked pretty much the same as the ‘Blue Picotee’ but a bit earlier to flower; Useful fresh or dried, primary stems were very nice and long; Unlike the Blue, we didn’t have any shattering issues

Problems: This was more a straight lavender than picotee, there was a lightening of color towards the throat, but the color distinction was subtle; Some seedling loss in the field but most survived and produced nice stems; Does not germinate easily in heat and drought!; None; More disease issues than QIS mix grown next to it; Would have liked more height and a thicker stand, though the flowers are pretty, the stems are so slender - you pick and pick and pick! had to use support netting, laterals were quite short; Unlike the Blue, ‘Purple Picotee’ showed about average susceptibility to powdery mildew, though I was still very pleased with the crop; First time growing larkspur in high tunnels, it eventually germinated in mid-April, rather erratically and after we’d given up hope, I transplanted young plants to consolidate space without any adverse effects on crop, we sold a couple of bunches but overall the stems were too short which I think was due to erratic germination, no pest or disease problems.

Similar cultivars: Not that we have grown; Color is similar to ‘Sublime Lilac’; Planted the Cannes series next to two other mixtures that I have had moderate success with and these three cultivars outperformed my comparison larkspur - this was one of my successes in the variety trial this year along with the sunflowers and kale; ‘Sydney Blue Picotee’; ‘Bicolor Sublime’.

Additional comments: We have a difficult time growing larkspur and will probably not grow it again. We need to get it in early in the hoop house before it gets too warm; Great for bouquets, added a nice quality, easy to break tips of flowers off in handling but typical of any cultivar and not unique to Cannes series; Did direct seed this in spring and attempted to irrigate, but the 30°C days and no rain did not help us, we had heard from the breeder that it could be used as a fall cut, so we started them in plugs and transplanted, they were

not irrigated and there was no rain, so the stems we got were not optimal - and not indicative of the variety, but, we loved the colour!; I’d like to see if this one does as well outside as it does in the greenhouse; We used all that we could cut in bouquets; Number of cuts were limited by late planting, planted both direct seeded and transplanted but no difference in harvest; Probably would have done better with an early and direct sow, wonder if it will reseed itself for next year? If I were to do it over I would direct sow, thickly, in very early spring as fall sowings can be very iffy here in zone 4B.

Postharvest handling: We used just plain water (2) and kept in a cool spot. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

‘Cannes Rose Stripe’ (American Takii)

Good qualities: Nice and unique color (6), darker pink and unusual stripe; More rose than “stripey”, useful fresh and dried, primary stems were nice and long; Grew well transplanted into tunnel in early spring, good color variety although customers did not appreciate as much as I thought they would; Moderately drought tolerant, no insect damage; Strong plants, disease resistant; This series is easier to grow than other larkspur I have tried and all three cultivars responded the same, the only difference was the color - the colors were wonderful with deep rich purple, rose (even with the stripe) and blue; My customers love them, transplanted well and did very well in the greenhouse, no disease problems, sold every stem; Frilly petal edges, petals slow to shatter; Did well because we had a cool spring; Rapid bloom, full flower spikes, remained upright without support.

Problems: Would have liked longer stems and thicker stand, had to use support netting, laterals quite short, stems so slender; More disease issues than QIS mix grown next to it; I expected more stripes, but it was a subtle shading rather than a clear bicolor; Some seedling loss in the field but most survived and produced nice stems; First time growing larkspur in high tunnels, it eventually germinated in mid-April, rather erratically and after we’d given up hope, I transplanted young plants to consolidate space without any adverse effects on crop, we sold a couple of bunches but overall the stems were too short which I think was due to erratic germination, no pest or disease problems.

Similar cultivars: Planted the Cannes series next to two other mixtures that I have had moderate success with and these three

cultivars outperformed my comparison larkspur, this was one of my successes in the variety trial this year along with the sunflowers and kale; Not that we know of.

Additional comments: It is a bit risky to plant larkspur in the fall in zone 4B but I think everything would have improved with a very early direct sowing—thickly placed!; Great for bouquets, added a nice quality, easy to break tips of flowers off in handling but typical of any cultivar and not unique to Cannes series; I'd like to see if this one does as well outside as it does in the greenhouse; Number of cuts were limited by late planting, planted both direct seeded and transplanted but no difference in harvest.

Postharvest handling: Using Floralife crystals. Using the cooler on hot days seems to shock the flowers when they are taken out and taken to market.

Lisianthus

'ABC 2-3 Green' (Pan American/Ball Seed)

Good qualities: Appealing color (4), light tinge of green accented the pale yellow underneath; Long stems (4), nice double flowers that filled out well, I like that more than one flower bloomed at a time, plants were healthy and stayed green, not much wilt; Productive in tunnel; Vigorous, Lovely pale green double flowers that looked good with everything, long vase life; Great green, sought after by designers.

Problems: Continue to be unsuccessful growing *Eustoma* and the ABC series was no exception. Although they were the first seed sown in the greenhouse they were the last to be transplanted out. Very slow to germinate and slower to make a transplantable plant. In the case of 'Lavender', '2-3 Green', and 'White' seeds were pelleted. Seeds were singulated into plug trays and germinated as plugs. 'White' also came as fine seed and it was broadcast seeded and then transplanted. Transplanted seedlings were about 2 weeks slower to make a transplantable plant for the field beds compared to plugs; Stem strength poor: requires netting (not provided); Crooked bud stems; Did not germinate.

Additional comments: I should have said about all varieties of lisianthus this year that I found very little, if any, wilt in the varieties this year—all plants were healthy and held up under the stress of the hot July dry days; Grown in 30%+ shade.

Postharvest handling: Food.

'ABC Lavender' (Pan American/Ball Seed)

Good qualities: Long stems (5); Beautiful color (4); Strong stems (2); Great regrowth, healthy plants; Continuous blooming, large double flowers, more than one blooming at a time; Nice-looking lisianthus, lovely purple, double blooms, one of the favorites in the trial. 3-4 flowers blooming per stem at harvest time; Erect, large flower, productive.

Problems: None (2); I continue to be unsuccessful growing *Eustoma* and the ABC series was no exception, although they were the first seed sown in the greenhouse they were the last to be transplanted out, very slow to germinate and slower to make a transplantable plant—in the case of 'Lavender', '2-3 Green', and 'White' seeds were pelleted, seeds were singulated into plug trays and germinated as plugs, 'White' also came as fine seed and it was broadcast seeded and then transplanted, transplanted seedlings were about 2 weeks slower to make a transplantable plant for the field beds compared to plugs.

Similar cultivars: 'Mariachi Lavender'; Similar to the Mariachi and double Magic.

Additional comments: Really happy with this one—early and great second growth, great! Liked this one really well, it was nice and large and people loved the soft color; Plants grew well in the field even under the stress of drought in July; I seem to get the best germination from the Magic series; This was one of my favorite lissies.

Postharvest handling: Floralife, plain water. See separate postharvest report in this issue for results from NC State University postharvest evaluations.



'ABC Lavender'

'ABC 1-3 White' (Pan American/Ball Seed)

Good qualities: First white lisianthus we have liked, very nice; Beautiful snowy white, strong stem and good stem length, productive; Gorgeous double white blooms; Great, really pretty, and some seemed to have a light scent; Large flowers, still blooming with cool nights, actually, they seem to grow better in the cooler weather, plants are nice and full and seemed to endure the stress of drought in July.

Problems: None (2); Not a heavy producer for us, only around two usable stems; Regrowth not spectacular; I continue to be unsuccessful growing *Eustoma* and the ABC series was no exception, although they were the first seed sown in the greenhouse they were the last to be transplanted out, very slow to germinate and slower to make a transplantable plant, in the case of 'Lavender' '2-3 Green' and 'White' seeds were pelleted, seeds were singulated into plug trays and germinated as plugs, 'White' also came as fine seed and it was broadcast seeded and then transplanted, transplanted seedlings were about 2 weeks slower to make a transplantable plant for the field beds compared to plugs; Like any white flower, they brown easily on the edges with the dew of the morning and hot sun afterwards, I try to cut early so that they can dry off.

Similar cultivars: 'Mariachi White', but less rounded petals.

Postharvest handling: Floralife on all lisianthus; flower food. See separate postharvest report in this issue for results from NC State University postharvest evaluations.

'ABC White GX12444'

(Pan American/Ball Seed)

Good qualities: Awesome pure white double blooms with several flowers concentrated at the top of the stems for maximum impact and a beautiful show; Beautiful white, strong stem, good stem length.

Problems: Did not germinate.

Postharvest handling: Flower food.

'Fioretti Green' (Sakata Seed)

Good qualities: Different, nice stems, lots of blooms; Pretty color, nice spray of small flowers; It was a nice color and went very well with the 'Wonderous Light Brown'; Interesting new spray type; Very different looking lisianthus, stem are covered with tulip shaped blooms; The color of the yellow and white was very nice but the green was too pale to make a statement, most everyone thought it was white, though small, the flowers were well shaped and held for an extended

period of time; Multiple small blooms per stem, very delicate appearance; Adorable tiny single flowers in clusters, blooms have a pleasant green tinge, more of a filler flower and not easily identified as a lisianthus; Great for wedding bouquet work and smaller design work—not for farmers’ market straight bunches.

Problems: Short (5); Small flowers; Color similar to ‘Fioretti Yellow’; I’m not sure about the flower size, I didn’t have enough to see really what the market would make out of this form of lisianthus, they love the large-flowered stuff; I don’t think there are any, once again, I think the drought caused shortened stems; A little more fussy to deadhead if necessary than standard lisianthus; Not very productive some flowers go by and need to be picked off; The lisianthus seed did not germinate well, approximately 1% germinated, the seedlings were extremely slow growing.

Similar cultivars: Other Fiorettis.

Additional comments: Not as impressed with this variety as I was the ‘ABC 2-3 Green’; Same as other lisianthus, I would love to try it again but get it in as plugs and get it in much earlier so it can be planted in the greenhouse by the middle of February; Grown in 30%+ shade, first of ‘Fioretti’ cultivars to bloom of those trialed; Hard to tell the cream, yellow and green apart, there needs to be a better division of these colors; Long flowering period—very rugged.

Postharvest handling: See separate postharvest report in this issue for results from NC State University postharvest evaluations.

‘Fioretti White’ (Sakata Seed)

Good qualities: Long harvest window, great for wedding work; Similar to other Fiorettis; Lots of flowers, nice stems; The color of the white was very nice, though small, the flowers were well shaped and held for an extended period of time; Tallest of three ‘Fiorettis’ trialed, multiple small blooms per stem, VERY white, very delicate appearance; Same habit as ‘Fioretti Green’ but blooms of pure white, a great filler flower, wonderful for small wedding work; Great for wedding bouquet work and smaller design work—not for farmers’ market straight bunches.

Problems: Too short (3); I transplanted young, so good first cut, but second growth

really short; I don’t think there are any; Not very productive: some flowers go by and need to be picked off.

Additional comments: Tiny singles have a limited use. Used almost exclusively for weddings; Grown in 30%+ shade; Long flowering period—very rugged; Not better than old ‘Catalina White’.

‘Fioretti Yellow’ (Sakata Seed)

Good qualities: Nice pale yellow (3); Very different lisianthus than any we have grown, many small flowers on branches; New spray type lisianthus, flowers much smaller than older cultivars, probably will have special



uses; Though small, the flowers were well shaped and held for an extended period of time; Multiple small blooms per stem, very delicate appearance; Same general type as the other Fiorettis but with a lovely blush yellow color; Great for wedding bouquet work and smaller design work—not for farmers’ market straight bunches.

Problems: Short stems (4); We had problems with germination and did not end up with many plants for the trial, we have the best

luck with the Magic series; Not used like “normal” lisianthus, special bouquets?; Not very productive: some flowers go by and need to be picked off; Lisianthus seed did not germinate well—approximately 1% germinated, the seedlings were extremely slow growing.

Similar cultivars: None that we have grown.

Additional comments: Grown in 30%+ shade; Long flowering period—very rugged.

‘Mariachi Carmine’ (Sakata Seed)

Good qualities: Color was outstanding (7), me, my staff, and customers couldn’t get enough; Flower size was good but not as big as others

I’ve grown, plants didn’t get as big as other varieties; Nice flower form, strong & straight stems; Interesting color—not as popular as more traditional colors but great to have in the collection; A favorite! The dark, dark pink double blooms were a real head turner in the trial, long lasting and showy; It was a bit shorter than other Mariachi varieties we have grown but it had a high bud count, very pretty!

Problems: None, good Mariachi type; I didn’t like the color; Relatively short stems; Color faded; None; The lisianthus seed did not germinate.

Similar cultivars: None that we have grown.

Additional comments: Will definitely grow again; Grown in 30%+ shade; We would definitely grow this again, it was very popular, a vibrant color compared to many of the pastel lissies.

Postharvest handling: I use Floralife Crystal on everything, customers always remark how long my flowers seem to last for them; None - plain water.

‘Ruffle Blue’ (Sakata Seed)

Good qualities: Beautiful deep blue color (3); Attractive ruffled edges of petals (3); Wonderful, single blooms with ruffled edges, making them look like doubles; I love these, I really like the large flower size.

Problems: The lisianthus seed did not germinate; Stems tended to be a bit shorter than the other varieties in trial; Not a fan of singles, or ruffles, it turns out; Less productive in field than in tunnel; Customers want double lisi; Short stems, not as vigorous as the other varieties; Small flower size not

that popular, kind of interesting but I will not plant again.

Additional comments: All of the trial lisianthus were viewed as novelties, whereas I had full buckets of solid colors of my own lisianthus, we usually only had a few bunches of each trial, and grouped them together in one bucket, there by reducing their visual impact. This may well have had an effect on their sales; Grown in 30%+ shade.

Postharvest handling: See separate postharvest report in this issue for results from NC State University postharvest evaluations.

‘Ruffle Green’ (Sakata Seed)

Good qualities: Attractive greenish-yellow flower, productive; Like the ruffled edge; Easy to grow, but results were better in the tunnel: 8 stems/plant and 19 inches tall; Green color is nice, but white always sold first; This was another of my favorites, very lush and crisp; Attractive bloom.

Problems: The lisianthus seed did not germinate; Moderate stem length; Most customers want double lisi, the singles sell only if we have no double; Sparse or no flower stalks or most plants, did not perform as well as other trialed lisianthus; Small flower size not that popular, kind of interesting but I will not plant again.

Additional comments: This one gets my runner-up for best of trial; Grown in 30%+ shade.

‘Ruffle Yellow’ (Sakata Seed)

Good qualities: Attractive ruffled petal edges (5); Consistent from plant to plant; Good color; Clean yellow flower color, productive; Big ruffled flowers, nice color good stems and height; I like this color the best, and the ruffle look, but farmers’ market customers did not seem to like any of this series very much, florists were okay with it but prefer doubles; The most blooms of the three “ruffles” trialed; Nice pale green color.

Problems: Short (3); This color is not popular; Flower size not that popular, kind of interesting but I will not plant again; The lisianthus seed did not germinate.

Similar cultivars: ‘ABC 2-3 Green’.

Additional comments: Not a huge fan of the singles, it sold after ABC/Mariachi types were gone; Grown in 30%+ shade.



‘Wonderous Light Brown’

‘Wonderous Light Brown’

(Sakata Seed)

Good qualities: Unusual color (5), reminded us of antique lace; A great, great color; Not really brown, more pink caramel, attractive ruffled petal edges; I think that these grew very well, nice stems and good height; Petals are stiff; Very long stems and flowering for the longest period without interruption, interesting.

Problems: I’m not sure that brown is a good color for cut flowers, but it is kind of interesting looking, sort of tea stained, I can understand why it is interesting to the breeders but I’m not sure the general public is ready for it; Single flower, would have been just wonderful as a double; Some plants not same color flower—seed mixture?; One of the last to be purchased, with customers either loving or hating the flower colors, some plants produced only pink blooms; Smaller flowers, not as productive; The color is not for everyone and did not seem to have widespread appeal, the brown color made some observers think that it was past its prime and it wasn’t as adaptable to bouquets and common color arrangements as other lisianthus varieties; Designers were impressed to see a NEW lisianthus color but no one ordered it at the market, customers didn’t even notice it, much less buy it; The lisianthus seed did not germinate.

Additional comments: We didn’t have too many seeds germinate but the ones that did produced great flowers, I would be willing to try this one again, maybe buy in plugs and see if that will work better, time of year for us is another issue; Grown in 30%+ shade; Color is more salmon/frosty beige than brown, customers either loved it or passed.

‘Wonderous Purple’

(Sakata Seed)

Good qualities: Unique deep blue color (4) with white mid-petal banding; Most productive variety in tunnel and field trials; Stiff stems and flowers; Nice strong stems, many flowers bloomed at a single time.

Problems: The lisianthus seed did not germinate; Not pretty; No one thought it was worthwhile to have in their house; Color a muddy purple, with what looks like necrotic edges, there was a variety mix in this entry: a few single flowers of medium purple color, appearance is not acceptable; I did not like the iridescence on the outside of the flowers too dark for some customers; Small flower size and color was not accepted to my customers, not as nice as ‘Wonderous Brown’, less productive; The petals all had markings on them that made them look damaged, it wasn’t an insect problem or water but seemed, in our trial anyway, to be a characteristic of the cultivar, it made the blooms appear damaged before they were even open and that made them unappealing; Could not use a single stem as they always seemed to look like they were spent, the edges on the flowers were always brown, when the evenings became cool, the plants still bloomed, but the flowers were old and withered looking.

Additional comments: Grown in 30%+ shade; Will not grow again; Didn’t like this one, as the flowers were small and clustered, you had to cut the whole stem in order to try to use it which set the plant back longer before the next blossom, but as I said, I couldn’t use any of the flowers.

Postharvest handling: See separate postharvest report in this issue for results from NC State University postharvest evaluations.

Pepper

‘Cappa Conic White/Red’

(Kieft-Pro-Seeds)

Good qualities: My favorite of the Cappas served as unique filler in arrangements, had one customer who requested arrangements with a “Candyland” theme, ‘Cappa Conic’ made perfect “candy” peppers, turn color early; Easy to germinate, grow transplants and to transplant; Really attractive fruit, conic shape and fruit arrangement all great, good stem length; Liked this pepper, very productive, matured earlier than others that I have grown; Attractive yellow and red fruits on sturdy stems; The fruit was nice, larger than ‘Cappa Conic Top Fruit White’/‘Red’, in our trials it was a good container plant but the fruit was a little too large to make a good cut; Unique addition to cut flower bouquets, drought tolerant, saline tolerant, no insect damage; This one doesn’t stick in my mind as much as ‘Top Fruit’ but it shares many of the same good features of color, second earliest of 10 cultivars of ornamental peppers with August 26 harvest date; All the pepper color phases make great cuts; non-terminating branches allow for many peppers per branch and extended harvest season; Interesting colors of fruit on plant at same time: red, orange, creamy white range of conical fruit, may be dominant in an arrangement, deep green foliage is attractive, good for large pieces; Looked like little Christmas tree lights; Very strong stems, basal branching, white and/or red peppers on same plant—nice shape—good holding on plant.

Problems Plants quite short (2); Growing season not long enough or hot enough to obtain crop, the plants grew well but flowered about the time of the first frost, one of the Conic had a fruit and it looked good but not enough to further evaluate the cultivars; Easy to grow, nice plant but little interest from florists; Stems short when grown in field, but adequate in tunnel, some consumers complained about the pungency of the fruit: they are hot; Difficulty hardening before transplanting; Most years, our season is too short for peppers to turn red; Needs support, otherwise falls over; None; Had a very early frost which set the plants back badly and/or killed them.

Similar cultivars: ‘Cappa Conic Top Fruit White’/‘Red’.

Additional comments: This was a nice addition to late-season flower arrangements, gave them a pop; A colorful fall item, good “harvest” decoration; These pepper stems really added something extra to mixed



bouquets; Last year’s, ‘Top Round Bronze’ peppers much more useable and a better seller in bouquets; Harder to incorporate into bouquets than the ‘Top Fruit’ but we did use some of this variety in the table arrangements for the wedding, both types of peppers held up well in Oasis, including foliage.

Postharvest handling: Defoliation is tedious and time consuming, we did not try sweating off the leaves, but 1000 ppm Ethrel was not effective as a foliar spray in the cool tunnel environment to remove leaves.

‘Cappa Round Red’ (Kieft-Pro-Seeds)

Good qualities: Stems good length with good-sized and quality peppers, branches non-terminating, allowing for many peppers per branch and a longer season of prime cuts; Healthy plants, strong stems; Easy to germinate, grow transplants and to transplant; Tall plant, attractive round fruits; Decent fruit but was still green in August and didn’t color up until September; Very strong basal branching, nice bright red roundish peppers, long keepers; Unique addition to cut flower bouquets, drought tolerant, saline tolerant, no insect damage.

Problems: Not very attractive, nothing stands out about it, especially compared to other two Cappa peppers; A little shorter than I would have liked; Growing season not long enough or hot enough to obtain crop, the plants grew well but flowered about the time of the first frost, one of the Conic had a fruit and it looked good but not enough to further evaluate the cultivars; Most years our season is too short

for peppers to turn red, green peppers are not popular; Late maturity, can fruit drop be a problem when not harvested promptly, without Ethrel application?; No support, plants grew as prostrate bushes; Wish plants were taller in field, early frost limited yield; Difficulty hardening before transplanting.

Additional comments: Good potential for use in Christmas bouquets/ arrangements with its green and red peppers, peppers look like Christmas tree bulbs; Last year’s top round-bronze pepper much more useable and better seller in bouquets.

Postharvest handling: This variety is green when immature, and red when ripe. It was a couple of weeks later maturing than the other Cappa types trialed. Defoliation a problem. This variety dropped all its fruits when plants sprayed with 1000 ppm Ethrel a week before harvest.

‘Cappa Topfruit White/Red’

(Kieft-Pro-Seeds)

Good qualities: The white fruit made for an interesting addition to the more common *Capsicum* offerings; Easy to germinate, grow transplants and to transplant; Customers find it unique, adds great interest to arrangements with peppers turned yellow/orange/red early; Earliest of 10 ornamental pepper cultivars, first harvest August 17 or 2 months after transplanting to the high tunnel and about 10 days before Conic White/Red, nice presentation of cluster of peppers, good workable length for bouquet work, bright clear lemon yellow early (so-called white) is very attractive for September bouquets; Fruit is upright and nice in mixed bouquets, I used it in yellow and red stages, customers love the idea of peppers in bouquet—many wanted to eat them; Unique addition to cut flower bouquets, drought tolerant, saline tolerant, no insect damage; Easy to grow, produced a 20 to 24 inch plant; “Topfruit” is accurate, fruit is great for mixed bouquets, I liked the yellow-orange-red all together look, still cutting on 10/20!; Colorful fall decoration; All stages of coloring (pepper) are attractive and appropriate to cut, scant number of leaves snap off quickly and easily, essentially all stems have good length and pepper quantity and quality; Earliest of the Cappas to have useable fruit; Stayed upright without support, slender fruits were attractive, red, orange, light yellow in color at the same time, vigorous growth; Crop did not mature even in a plastic tunnel.

Problems: Too short (3); Growing season not long enough or hot enough to obtain crop, the plants grew well but flowered about the

time of the first frost, one of the Conic had a fruit and it looked good but not enough to further evaluate the cultivars; Almost too early, high temps in July/August this year pushed maturity before florists were interested in ornamental peppers, these were grown in high tunnels because we normally get a frost in mid-Sept.; None really; Difficulty hardening before transplanting; Only mild interest from florists, could not sell much, they wanted one color, not many shades of yellow to red; Stink bugs loved this plant. fruit dropped before coloring; Pungency may be a problem for some customers, this variety is hot; This pepper lost a lot of length because we cut several inches of the top to show the peppers, this is not a topfruit pepper as description states; Fruits are bunched together rather than being spaced along stem; First flush of peppers was at 10 to 12 inches then it continued growing but following fruit did not mature.

Similar cultivars: The Starburst series, but ‘Cappa Topfruit’ has larger, plumper fruit; Similar upright habit to ‘Nippon Taka’ pepper from Johnny’s.

Additional comments: I love this one—ornamental peppers are not yet really popular with most Nebraska florists, partly because there has not been a local wholesale company offering them, they will eventually get on board; We used the peppers in bridesmaids’ bouquets for a fall wedding this year, they were a big hit!; Nicest pepper for bunching, excellent late season addition; Best “on-top” pepper I have grown, customers asked specifically for these in bouquets; We seeded all of our peppers quite late, thankfully we had a warm fall and were able to see the fruits, although mostly in a green state; Last year’s ‘Top Round Bronze’ pepper is much more useable and a better seller in bouquets.

Postharvest handling: Leaves are easiest to strip when fresh in the field; Defoliation is time consuming, we tried Ethrel spray at 1000 ppm, but got little defoliation: perhaps tunnel was too cool by then. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

Snapdragon

‘Animation Cognac’ (Benary Seed)

Good qualities: Beautiful pink and yellow color (12), kind of like scrambled eggs; Good stem length (3); Very drought tolerant, not susceptible to insect damage by flea beetles; Good height for time of year (October), long

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‘Cappa Topfruit White/Red’

taper and spike; Prolific; Strong stems, close spacing on florets; Best rebloomer I have ever grown; The color is interesting up close, having both yellow and pink on the flowers, from a distance, though, they look kind of muddy; Very hardy; Very strong stems, good dense spikes, combined well with many other shades; Very productive, sturdy, less subject to heat inhibition of buds than some other cultivars; Sturdy stems, color is ok, range is very popular for us, florists would use this; Good as a filler flower; Very nice color combination, unlike these we have previously grown; Both were great colors, we did not net (and yes I know that everyone else does) but they grew real well, and even though we



‘Animation Cognac’

had some plants knocked over, their stems were still plenty long; Tall, upright stems, fantastic and we love it; Good production, I was a little questionable about the color when it first came out, but then it worked well with many combinations of flowers and colors, I really liked it, and it is still blooming.

Problems: Too short (3); None (2); Susceptible to wind and hail damage; A bit gappy; A bit loud for a New England spring, better as a fall snap; Didn’t particularly like the color, stems in the field were thin and weak, easily fell over, didn’t harvest all the stems that were harvestable because didn’t like the color; I had two snapdragon cultivars in the variety trial this year and grew them along side and among my usual Rocket Mix, although I had the same cultural (insect) problems with the Rockets they did produce usable stems while this one did not, however, the few florets on those stems that flowered had a nice attractive color, the problem was not the cultivar, but rather a serious infestation of a class of ‘stink bugs’ that caused the plant to develop abnormal growth restricting flowering—my insect control program (which is minimal) did not control the insects creating a crop failure; It needs support net or it will fall over; Some customers didn’t like the color for spring; thought it was better suited to autumn; A group 2 snap not particularly useful for main season in the field; started out strong but succumbed to the heat of July and August, made a weak comeback in September and October, might be better for winter-spring greenhouse production; Showed lots of rust late in cropping cycle, but produced numerous stems before succumbing to disease.

Similar cultivars: No; Similar in color to ‘Opus Bronze’.

Additional comments: At this time of year, ‘Cognac’, ‘Yellow’ and ‘Pink Improved’ are best quality Animations and well matched for crop time; It’s an okay flower for short bouquet work; I think this was the standout of all the trials, and gets my vote for #1; Although I did not produce usable stems of this cultivar, I do see potential as a nice color addition to summer field snaps; Responds well to topping at this wide spacing, also grew well in a fall-planted trial in the high tunnel; The Animation series in general does not get tall enough for our uses, not nearly as productive as Potomacs, Spring Giant, and Rocket, which are what we do well with; Color not as vibrant as ‘Opus Bronze’, doesn’t stand out as anything special; Despite the rust, these were very attractive stems and much appreciated by our customers; we grew in the field and it needed support; I cannot say enough good

things about this snap, it is still providing me with quality cuts.

Postharvest handling: Floralife solution, keep upright; Everything clean!; We don't sleeve, and stems needed to be very upright in buckets to preventing bending; Floralife crystals and then in the cooler, did drop bottom flowers when it was really hot and coming out of the cooler.

'Chantilly Orange' (American Takii)

Good qualities: Great color (8); The color is very unique, we called it "cinnamon", florist customers like the color; Unique, butterfly-like, attractive individual flowers (3); Tons of stems—great regrowth; I particularly enjoyed the 'Chantilly Orange' for bouquet work, we did not net (and yes I know that everyone else does) but they grew real well, and even though we had some plants knocked over, their stems were still plenty long; Upright stems, We couldn't get enough of this flower!; Productive, good stem length; I prefer the shape of Chantilly series over the other butterfly types, I was surprised at how well the Group 1 and 2 snaps performed for us, very prolific—we stopped harvesting this cultivar since color is not popular in late spring and stems were getting short, I would plant Chantilly-type again in the spring but a different color and not pinched.

Problems: Too short (4), though I was able to sell some to florists; Harder to sell in spring; Field-grown stems were thin and bent easily, should have been netted in the field; I had two snapdragon cultivars in the variety trial this year and grew them along side and among my usual Rocket Mix, although I had the same cultural (insect) problems with the Rockets they did produce usable stems while 'Chantilly Dark Orange' did not.

However, the few florets on those stems of 'Chantilly Dark Orange' that flowered had a nice attractive orange color, the problem was not the cultivar, but rather a serious infestation of a class of 'stink bugs' that caused the plant to develop abnormal growth restricting flowering, my insect control program (which is minimal) did not control the insects creating a crop failure; The color was a rusty orange, not a good spring color, which is the only time I could grow it; Beautiful open flowers with yellow throat with almost iridescent gold anthers, fair tolerance to heat; Thin stems, too early for good quality in October in

greenhouse in southern California; Very susceptible to heat stress, too few florets per stem; Performed the most poorly out of all my snaps—all had same field conditions and were set out at the same time—poor stand, poor height, poor rebloom. Will try again but over all it was shorter and less productive than 'Spring Giant', I want to try these again; Color was more of a red/orange than a pure Halloween orange.

Similar cultivars: Not that I am aware of; 'Apollo Cinnamon' is similar color and later to flower—better for October flowering; Supreme series.



'Chantilly Orange'

Additional comments: These were also susceptible to rust, but not until late in the cropping cycle; Very good cultivar overall, I grew it along 'Chantilly Cream' and 'Light Salmon', also good; Began harvest 6/20; What few florets opened indicated a potential for this open-faced orange flower; They would have done better by being sown earlier (you have no control over that, I know) but I got to see what they would look like and the color is great; We would grow again and try for better results; Customers almost always picked these over other snaps; Used support netting; First harvest was May 14, 2007 for

'Chantilly' and 'Supreme White' (earlier than 'Supreme Yellow' and Monaco series), half of each plot was pinched on April 26, 2007, leaving 3 to 4 nodes (we won't do this again).

Postharvest handling: I felt these stems really needed to be cut early in the bloom cycle to have the 7-day vase life. See separate postharvest report in this issue for results from NC State University postharvest evaluations.

Stock

'Katz Cherry Blossom'

(PanAmerican/Ball Seed) Released under the name Mambo, renamed Katz.

Good qualities: Gorgeous, bright color (3), nice two-tone pink, sturdy stem; Early to bloom makes this one a keeper! (2); Nice scent, good stem length, held up well; 'Mambo Cherry' is the color of cherry blossoms (light pink), not the fruit; Easy to grow, no major pests, very easy to harvest and bunch; Early cut, 32 days from field planting, clean color/nice double flower, single flowers useable in bouquets; Easy to germinate and early to go to field beds; All plants flowered; Good height compared to 'Aida', good fragrance; As with other trial cultivars, getting a few bonus lateral/basal shoots gives us bonus material to work into our smaller mixed bouquets.

Problems: None (2); May not be a problem for other growers, but bloomed too early for my market, only one stem...maybe I wasn't harvesting properly; Too fat use in bouquets; Not a prolific bloomer, did not transplant well; No marketable flowers on any cultivar in series; Relatively short stems, high percentage singles; Needs to be staked, had trouble singling out singles vs. doubles; A fairly nice mid

pink, a little easier on the eye than the 'Mambo Pink'.

Similar cultivars: None that we have grown, we have grown the Goldcut series but the color was much more delicate for this variety.

Additional comments: I would definitely grow this again, customers liked the color; This was my first attempt at growing stock so was nervous about how to germinate and grow plugs, esp. as 288's. Delay in planting 'Mambo Pink' was to let the plants get a little bigger before planting in the high tunnel. If I can learn how to get a little longer stem and a little bigger head, it will be a winner at the

wholesale florist due to fragrance and physical condition when delivered. In spite of a two-week difference in transplant date, there was only a 3-day difference in peak harvest date for the two cultivars. Harvested over a 2-week period; All plants in the series looked good during the germination, seedling, and early growth phase as young plants in the greenhouse and as plants in the beds, however, when flowering time came the flowers were useless, one or two florets, stunted spikes and not harvestable; Transplanting into tunnel on day 37 resulted in stockier, taller plants than those transplanted a week later; Will grow again; Perhaps like ‘Appleblossom’?

Postharvest handling: We did not use any postharvest treatment, just plain water; Bleach in water.



not this season with this cultivar; We did not select against single in any of the varieties and each had less than 5% singles.

Additional comments: Next time plant much closer and pull singles (although I used them for mixed bouquets no problem), loved all three colors; I’m just not set up to do an early spring crop, would work well if I had a high tunnel; All plants in the series looked good during the germination, seedling, and early growth phase as young plants in the greenhouse and as plants in the beds, however, when flowering time came the flowers were useless, one or two florets, stunted spikes and not harvestable; It just doesn’t pay us to grow stock in the greenhouse and then outside it is short and not as nice, we really need to experiment with some hoops in the field to protect the plants and see if we can get larger flowers in the field, my customers would love that; Those planted in tunnel at 36 days after sowing were taller, stockier and with straighter stems than those kept in a warm greenhouse 1 week longer.

Postharvest handling: Bleach in water.

‘Katz Pink’

(PanAmerican/Ball Seed) Released under the name Mambo, renamed Katz.

Good qualities: Early flowering (3); Vibrant pale pink flower (2); Excellent; Little insect damage; ‘Mambo Cherry’ is the color of cherry blossoms (light pink), not the fruit, ‘Mambo Pink’ is hot pink; Easy to grow, no major pests, very easy to harvest and bunch; Similar to ‘Glory’, but stronger stems; Easy to germinate and early to go to field beds; High percentage of flowering; Strong upright stems,

Problems: None (2); Did not transplant well, susceptible to hail damage; No marketable flowers on any cultivar in series; High percentage of singles; Unfortunately I am a hard sell when it comes to certain pink hues and this one was challenging.

Additional comments: Next time plant much closer and pull singles (although I used them for mixed bouquets no problem), loved all three colors; This was my first attempt at growing stock so was nervous about how to germinate and grow plugs, especially as 288’s. Delay in planting ‘Mambo Pink’ was to let the plants get a little bigger before planting in the high tunnel. If I can learn how to get a little longer stem and a little bigger head, it will be a winner at the wholesale florist due to fragrance and physical condition when delivered. In spite of a two-week difference in transplant date, there was only a 3-day difference in peak harvest date for the two cultivars. Harvested over a 2-week period; All plants in the series looked good during the germination, seedling, and early growth phase as young plants in the greenhouse and as plants in the beds, however, when flowering time came the flowers were useless, one or two florets, stunted

‘Katz Lavender Light’

(PanAmerican/Ball Seed) Released under the name Mambo, renamed Katz.

Good qualities: Good color (3); Easy to germinate, fast growing and early to go to field beds; Excellent; Wonderful fragrance; Early blooming; All plants that germinated lived, germinated well; Reliable in flowering, early; This was a very subtle, but striking color and worked well mixed with both softer and bolder colors in our mixed bouquets.

Problems: Too short (2); No marketable flowers on any cultivar in series; None; Not a prolific bloomer, did not transplant well; I have never had any luck with stock of any sort; Very difficult to grow stocks in my climate, I have had hit and miss success, but

spikes and not harvestable; Transplanting into tunnel on day 37 resulted in stockier, taller plants than those transplanted a week later.

Postharvest handling: Bleach in water.

‘Katz White’

(PanAmerican/Ball Seed) Released under the name Mambo, renamed Katz.

Good qualities: Excellent quality, great scent, very easy to grow; Early blooming; Nothing stood out, we got this in very late, however, when it was getting too warm in the hoop house; Easy to germinate, fast growing and early to go to field beds; Tallest of Mambo series; Great fragrance, we did use the stems in small bouquets and customers appreciated the fragrance; This was a nice white column type stock, but not a noticeably different or improved version of ‘Avalanche’; Good colors, all plants that germinated lived, germinated well.

Problems: Not a prolific bloomer, did not transplant well; None; No marketable flowers on any cultivar in series; High proportion of singles; None to speak of, except a little slow.

Similar cultivars: This did not seem very different from either the Cheerful series or ‘White Beach’; ‘Avalanche’.

Additional comments: Next time much closer and pull singles (although I used them for mixed bouquets with no problem), loved all three colors; All plants in the series looked good during the germination, seedling, and early growth phase as young plants in the greenhouse and as plants in the beds, however, when flowering time came the flowers were useless, one or two florets, stunted spikes and not harvestable; It just doesn’t pay us to grow stock in the greenhouse and then outside it is short and not as nice, we really need to experiment with some hoops in the field to protect the plants and see if we can get larger flowers in the field, my customers would love that; Transplanting into tunnel on day 37 resulted in stockier, taller plants than those transplanted a week later; Would be better in a high tunnel as an early crop.

Postharvest handling: We did not use any postharvest treatment, plain water; Bleach in water.



‘Katz White’

Sunflower

‘Orange Glory’ (Fred C. Gloeckner)

Good qualities: Nice color (2); Good head size (2); OK sunflower; Single stem, later to bloom, nice disc size; A nice sunflower, but...; Very tall, so can cut at the needed length; Very drought tolerant, tolerant of severe weather (wind and hail damage); Standard orange cultivar; Excellent sunflower, this is probably going to be among our favorites, very uniform days to harvest, cut all of them in about 8-9 day span, beautiful flowers can cut tight and they open very nice! Did well mid and late (October) season; It did compare to ‘Sunrich Orange’ and was a little earlier, flowers held well and it was really difficult to tell the difference between this one and ‘Sunrich Orange’; Great color and form, pollenless, very stout stems, nice height, quick to flower—all came on at once! Excellent vase life! Customers loved it!; Classic sunflower, petals are nicely pointed; Nice form, strong neck and stem, good neck posture, perfect height; At each planting an equal amount of ‘Sunrich Orange’, ‘Tosca’ and ‘Orange Glory’ were direct seeded and although the seed of ‘Sunrich Orange’ was over a year old it germinated better than either of the two trial cultivars in all four sowings, during the growth phase all three were indistinguishable. However, at flowering ‘Tosca’ flowered approximately 5-7 days earlier than ‘Sunrich Orange’ at all planting dates. ‘Orange Glory’ flowered at the same time as ‘Sunrich Orange’ at all planting dates. The marketable flowers could not be distinguished by cultivar. In fact

‘Orange Glory’ and ‘Sunrich Orange’ are similar. They could not be identified as separate cultivars; Classic color.

Problems: None (3); Slightly shorter plant height (3)—can be an issue for large field production—need to bend for harvesting; Not a standout; It bloomed on the same schedule as ‘Pro Cut Orange’, which is better in every way: thicker stems, more substantial petals. It got too tall as the days lengthened, and took longer to bloom than ‘Pro Cut Orange’; Prone to insect leaf damage; Strongly daylength sensitive: Long-day plants flowered at 74 days from sowing, 3 weeks later than the short-day treated plants, stem length difference: long-day 46 inches, short-day 28 inches; Some had deer damage, some were attacked by the “Midge”???; I experienced an increase in insect problems over other sunflower cultivars; Insects all came at once!; Rock-like debris in seed packet; A bit later than the others in our trials.

Similar cultivars: ‘Sunrich Orange’ (5); ‘Sunbright’ (2); Probably closer to ‘Orange Glory’ than ‘Sunrich Orange’ in flower color; Seemed like ‘Pro Cut’; ‘Tosca’ is 5-7 days earlier ‘Orange Glory’ is not different from ‘Sunrich Orange’ in habit and time of flowering.

Additional comments: It flower slightly shorter and few days earlier than ‘Sunrich Orange’, came into 50% flowering on approximately 5/24/07 (planted on 3/9/07, zone not specified), pollenless flower; Send back to breeder for more work; Nothing special. For me it was just another sunflower, trends are changing in this area, large sunflowers as well as small-flowered sunflowers are selling well, ‘Pro Cut’ sunflowers harvested before ‘Orange Glory’; In short days, plants short and with profuse flower bud formation on upper nodes, so production should be limited to summer (long day) conditions; I am very impressed and I try a lot of sunflowers, uniform like ‘Pro Cut Orange’ but a nice flower, comes in just after ‘Sunrich Orange’, and with ‘Tiffany’, but they all come on together, not like ‘Tiffany’ which seems to go on for a couple of weeks; I would like to try more of this one next year and really compare it with ‘Sunrich Orange’, it’s hard to tell with 1,000 seeds, we do 40,000 ‘Sunrich Orange’ a year so I would like to try 15,000 ‘Orange Glory’ and see how they stand up to ‘Sunrich Orange’; Center seems to develop quickly even before petals unfold? smaller than ‘Sunbright’; Perfect complement to ‘Sunrich Orange Summer’ for weekly plantings for bouquets; I liked the similarity of the three cultivars. By having ‘Tosca’ flowering earlier gave me flexibility in harvesting to meet my markets.

Postharvest handling: Cut when petals are ready to open (before the bees get to pollinate), we also remove all leaves. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

‘Tosca’ (Fred C. Gloeckner)

Good qualities: Good bright sunflower color (6); Fast crop time (5), about 50 days; Early seedling vigor, early maturity of about 4 to 7 days earlier than ‘Sunrich Orange’ or ‘Orange Glory’; Nice size flower (2); Open face with upward, pointed petals, nice brown center, didn’t droop after being in water for 1 week; Small heads; Nice stem length; Really liked this cultivar, uniform blooming, most all plants produced a flower, seemed to last a long time; Nothing outstanding, my market currently appreciates traditional sunflowers; Early single stem; Very tall, so can cut at the needed length; Standard dark yellow sunflower of average disk diameter and stem length; Good size for bouquet work, stem size was nice and not too big; Pollenless, excellent field and cutting height, nice flower size, nice stout stems, excellent vase life; Good flower quality—big flower size (7.5" diameter), good plant height, easy for harvesting (slightly taller than ‘Orange Glory’); Strong stem and neck, good flower posture; The directions from Gloeckner indicated to compare to ‘Sunrich Orange’, thus, at each planting an equal amount of ‘Sunrich Orange’, ‘Tosca’ and ‘Orange Glory’ were direct seeded and although the seed of ‘Sunrich Orange’ was over a year old it germinated better than either of the two trial cultivars in all four seedings, during the growth phase all three were indistinguishable, however, at flowering ‘Tosca’ flowered approximately 5-7 days earlier and than ‘Sunrich Orange’ and ‘Orange Glory’ flowered at the same time as ‘Sunrich Orange’ at all planting dates, the marketable flowers could not be distinguished by cultivar, in fact ‘Orange Glory’ and ‘Sunrich Orange’ are similar, they could not be identified as separate cultivars; First planting was useless, pollen on these pollenless cultivars, petals in the middle of the cone, misshapen, the second planting yielded beautiful sunflowers; Huge heads.

Problems: Some of the flowers were not pollenless (2); Bloomed all at once in the heat of the summer, I didn’t like that each batch couldn’t be more timed, as flowers opened quickly; This did not germinate in three tries—not one flower; None; Short stems; Very daylength sensitive: flowers 17 days later in long days than short day conditions, on a

plant that is 44 in. tall, vs. 28 in. for the short-day plant; Petals curled back which I don’t care for, makes the flower look “old” and not as fresh; Insects all came on at once!; Non-uniform flowering window, can’t harvest at the same period, very thick stems, hard to cut/harvest; Erratic germination; Numerous culls due to flowers in the disk, other floral parts in the disk, misshapen heads, double and triple heads, pollen in some heads, very erratic and unpredictable; Misshaped useless flowers; Prone to insect leaf damage.

Similar cultivars: ‘Sunrich Orange’ (2) the heads were a bit smaller, but had similar color and petal shape; Very similar to ‘Sunrich Gold’ (2) but about a week earlier; Probably closer to ‘Orange Glory’ than ‘Sunrich Orange’ in flower color; ‘Tosca’ is 5-7 days earlier ‘Orange Glory’ and is not different from ‘Sunrich Orange’ in habit and time of flowering.

Additional comments: I would grow this again; I planted 2 varieties for the trials, this variety the seed was treated, this variety was not eaten by birds at planting, the other variety was completely eaten by birds at planting; For our wholesale customers, it is hard to switch them from their reliable standard varieties; For me, it was just another sunflower, trends are changing in this area, large sunflowers as well as small-flowered sunflowers are selling well, ‘Pro Cut’ sunflowers harvested before this variety; Short-day treatment (12-hour daylength for first 3 weeks after emergence) results in plants with short stems and profuse flower bud formation in upper nodes; Harvest a few days ahead of ‘Sunrich Orange’; Comparable to ‘Sunrich Orange’ in terms of plant and flowering habit, came into 50% flowering on approximately 5/20/07 (planted 3/9/07, no zone listed), pollenless flowers; Send back to breeder for more work; I liked the similarity of the three cultivars, by having ‘Tosca’ flowering earlier gave me flexibility in harvesting to meet my markets.

Postharvest handling: Plain water (2) - keep in a cool spot; Cut when petals are ready to open (before the bees get pollinate), we also remove all leaves; Floralife. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

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Postharvest Treatment of Specialty Cut Flowers

North Carolina State University Report for 2007

Erin M. Regan and John M. Dole
North Carolina State University

This project was supported by the American Floral Endowment, the ASCFG Research Foundation and numerous suppliers. The authors would like to thank Ingram McCall, Emma Locke, Erin Possiel, and Tina Krug for growing the cut flowers and for assisting with the postharvest studies.

Each year we test a sampling of the new cultivars included in the ASCFG National Cut Flower Trials and, occasionally, other species we are growing in our cut flower plots. This year we screened 15 new cut flower species/cultivars. The species with the longest vase life was pepper ‘Cappa Topfruit White/Red’. This plant produces moderately short stems which are ornamented with multicolored fruit at the top. Fruit color progresses from light yellow to a rich yellow to orange to red. This species does best in only a holding preservative, with a vase life of 18.4 days. When a hydrating solution was used in conjunction with the holding preservative, vase life dropped to 14.7 days. Without a holding preservative, vase life was reduced to 14.6 days without a hydrating solution and to 13.9 days with a hydrating solution. As a group, peppers are notorious for having foliage that rapidly yellows. We kept the foliage on the stems during the postharvest test to see if this cultivar would break with that tradition. Alas, it did not. We based the postharvest life on the fruit quality so the vase life is still accurate but the foliage should be removed at harvest as with other cultivars.

Other cultivars with a vase life longer than 14 days included lisianthus ‘Wonderous Purple’ and lisianthus ‘Fioretti Green’. The latter species produces numerous sturdy, bell-shaped flowers that hold their shape well. Vase life termination results from a browning of the flowers. The homeowner could easily remove the expired flowers and extend the vase life by days. Also, stems were a bit on the short side as they were grown in the field. We would expect taller stems in greenhouses or high tunnels.

This year we had two sunflowers in the trials and they produced predictable results—responding well to holding preservatives. ‘Orange Glory’ had the longest vase life, 12.7 days, and ‘Tosca’ had the shortest at 11.5 days. These cultivars performed slightly better than average. Over the last five years, 17 sunflower cultivars have been tested and most had a vase life of 8 to 11 days with the use of floral preservatives. Only three have produced a vase life over 14 days long (again, using floral preservative): ‘Sunny’, ‘Terra Cotta’, and ‘Sunbright’.



The Details

Field-grown flowers were harvested at the optimum stage of development into buckets of tap water. The stems were processed, sorted, and placed in the following treatments:

- Hydrator only
- Holding preservative only
- Hydrator followed by holding preservative
- Distilled water only

Floralife Hydraflor 100 (hydrator) and Floralife Professional (holding) were used. Where appropriate, stems were treated in the Hydraflor 100 for 4 hours and those in the Floralife Professional were treated for 44 hours. After treatment, stems were placed in tap water at $68\pm 4^{\circ}\text{F}$ under approximately 200 ftc light for 12 hrs/day. We expect that similar products from other companies would provide similar results. Because of limited flower numbers we are not able to test all products at this stage of evaluation. For most species we test 15 stems per treatment but will occasionally use 10 to 14 stems per treatment if we do not have enough stems. In the case of snapdragon ‘Chantilly Orange’, sunflower ‘Tosca’, larkspur ‘Cannes Crystal Pink’, larkspur ‘Cannes Purple Picotee’, and *Leycesteria formosa*, however, we had only 9, 8, 7, 7, and 6 stems per treatment, respectively.

The Fine Print

Our testing methods tend to produce the maximum vase life, which tells you the potential vase life of each species. We cut and process the stems rapidly, put one stem per jar, and use a postharvest temperature that is a little cooler than a typical home in the summer. These procedures were set up to provide a consistent environment so that anyone else should be able to repeat our work and get the same results. All of these factors typically add about one to several days to the vase life of some species compared to that of a typical cut flower producer. For example, flowers with a vase life of 6 to 8 days in testing would probably last 5 to 6 days for a typical grower, and flowers lasting 15 to 18 days would probably last 10 to 14 days. We especially want to note that when many flowers are added together in a vase, it takes only one or two “dirty” flowers to reduce the vase life of everything in the bouquet.

For several cultivars, we also listed the minimum vase life. We harvest and test 30 to 60 stems per cultivar and present the average vase life. With some cultivars most of the stems died about the same time. However, with other cultivars the flowers were terminated over a long period—thus the vase life of some of the stems was much shorter than the average. In those cases, we have included a minimum vase life.

Our Results

Dianthus ‘Bouquet Rose’

The vase life was about 11 days regardless of treatment. This flower was one of our favorites from the summer. The multicolored blooms made a nice bouquet on just one stem. Also, the plant produced well throughout the summer.

Dianthus ‘Fandango Crimson’

The vase life was 9 to 10 days regardless of treatment, a little shorter than dianthus ‘Bouquet Rose’, but still reasonable. This species had a wonderful, rich color, but was not as sturdy as ‘Bouquet Rose’. Minimum vase life was 3 days.

Heptacodium miconioides

The longest vase life, 11.5 days, occurred when this species was placed in a holding preservative, regardless of hydrator use. Without a holding preservative, vase life only slightly decreased to 10.5 to 11 days. This species was very brittle and shattered readily.

Larkspur ‘Cannes Crystal Pink’

The vase life was about 9 days for all treatments except only a hydrator, which resulted in a vase life of almost 7 days. Minimum vase life was 4 days when only a hydrator was used. Otherwise, minimum vase life was 6 days. This species had a tendency to become very dry and shatter.

Larkspur ‘Cannes Purple Picotee’

The vase life was 7.5 to 8.5 days regardless of treatment. As with ‘Cannes Crystal Pink’, minimum vase life was 4 days. This species also had a tendency to become very dry and shatter.

Leycesteria formosa

The vase life was 11 to 13 days regardless of treatment. This species was difficult to determine vase life on as there was significant spider mite damage at the time of harvest. It was unclear whether vase life declined due to the spider mites or if it was a natural decline. However, this species showed potential to be an interesting new cut.

Lisianthus ‘ABC 1-3 White’

The vase life was 9 to 10 days regardless of treatment. Minimum vase life was 5 days.

Lisianthus ‘ABC Lavender GX91863’

The vase life was 9 to 10 days regardless of treatment. Minimum vase life was 2 days. As with many lavender-colored lisianthus, buds that open after harvest tend to be white or pale colored.

Lisianthus ‘Fioretti Green’

The vase life was 15.5 to 16.8 days regardless of treatment. Minimum vase life was 5 days. Also, one stem lasted as long as 33 days!

Lisianthus ‘Ruffle Blue’

The vase life was 11 to 12 days regardless of treatment. Minimum vase life was 4 days.

Lisianthus ‘Wonderous Purple’

The longest vase life, 16.5 days, occurred when flowers were not held in a holding preservative. When they were placed in a holding preservative, vase life dropped to 14 days.

Pepper ‘Cappa Topfruit White/Red’

The longest vase life, 18.4 days, occurred when harvested into water and then held in a holding preservative. Vase life dropped to about 14 days when exposed to other treatments. The fruit was very showy, but the leaves quickly dropped from the stem. As a result, we judged the stems on the condition of the fruit. Most growers will want to strip all the foliage or as much as possible. Also, the pedicels had a tendency to wilt, thereby causing the fruit to fall downward instead of being held upright.

Snapdragon ‘Chantilly Orange’

The longest vase life, 7.5 days, occurred when a holding preservative was used, regardless of hydrator use. Without a preservative, this species lasted just 4 to 5 days. Furthermore, this species wilted readily.

Sunflower ‘Orange Glory’

The longest vase life, 12.5 days, occurred when a holding preservative was used. Without a preservative, this species lasted 9.5 to 10.5 days.

Sunflower ‘Tosca’

The longest vase life, 11 to 11.5 days, occurred when placed in either water or a hydrating solution and then a holding preservative. Without a preservative, this species lasted 9.5 to 10 days. Minimum vase life was 5 days.

CULTURE *Profile*

Allan Armitage and Judy Laushman

Baptisia australis False blue indigo



An underused cut flower, whose limitation appears to be a long maturity period and perhaps a limited availability of plants; however, seed can easily be germinated and flowers are well received by the consumer. The genus sports flowers in many colors, mainly in purple, white, and yellow, as well as a couple of hybrids in rather unusual colors. Although flowers are most noticeable, the foliage and the pods can also be harvested successfully.

The genus, which contains about 35 species, is rife with folklore. The genus comes from the Greek word *bapto* (“to dip”), a reference to the flower extract’s once being used as a substitute for indigo. *Baptisia australis* was often used for blue dyes, while *B. tinctoria* was a source of yellow dye in the southern United States. *Baptisia* is one of the most rewarding and historically fascinating genera available to growers and landscapers alike. Native to large areas of

the United States, plants afford exceptional performance and a mini-lesson in early American history. The common name refers to its use as a substitute, albeit not a great substitute, for the true indigo, *Indigofera*, of the West Indies. When *Indigofera* was in short supply, the English government contracted with farmers in Georgia and South Carolina in the mid 1700s to “farm” false blue indigo, *B. australis*, to increase the supply of the dye.

The farming of baptisia was one of the first recorded examples of agricultural subsidies. The process used to extract the dye was incredibly cumbersome and time-consuming. A report in the *Georgia State Gazette* of 10 May 1788 provided directions “for the Cultivation and Manufacture of Indigo” by “an Indigo Planter.” What with planting, cutting, beating, draining, and pressing, the process was doomed to a short life. Today, baptisia provides growers with a living example of Americana and, more importantly, with useful, beautiful cut flowers.

Propagation

It is best to gather seeds from existing plants, although seeds may be purchased. The key to successful seed harvest is to gather the seed as the seed pods turn black and sow when fresh. Seed propagation is less erratic when seeds are given a scarification treatment. Piercing or scraping the seeds with sandpaper or another abrasive substance is helpful, but not essential. This allows moisture and oxygen to penetrate the seed coat. Acid scarification is used commercially but should be performed only by trained individuals. Once the seeds have been treated, place them in a peat/vermiculite mix in a moist, warm environment.

Germination of over 90% occurred regardless of acid and mechanical scarification, cold and hot water soaking, or cold stratification. A cold treatment of approximately 40F is also useful and can be accomplished in a cold frame, refrigerator or incubator. Seed germinates in 10-18 days at 70F. The fleshy roots may also be divided between October and March.

Growing-on

Transplant plugs or seedlings to 4-5" containers and grow on at 58F until they are large enough to be placed in the field. Once in the field, they should not be disturbed.

Environmental Factors

Temperature: Cold is beneficial for growth and flowering but plants are tolerant of warm summer weather. Plants are perennials and flower for many years.

Photoperiod: Plants do not appear to have a photoperiodic requirement.

Field Performance

Yield: Little information on yield is available, but nothing should be harvested the first year, and minimal harvesting should be done the second. By the fourth year, plants are fully mature, and a dozen stems per plant can be harvested.

Spacing. We recommend spacing of at least 2' between plants to allow them to fill in. Plants will be productive for many years, so dense spacing is counterproductive.

Fertilization: Plants belong to the pea family, so they are able to produce their own nitrogen; however, this does not mean that plants do not need feeding. Side dress with a complete fertilizer as new shoots arise. No additional fertilizing is needed after early summer.

Longevity: If plants are properly cared for, production for 10 years is not unusual.

Stage of Harvest

Flowers are harvested when approximately one-third of the flowers on the inflorescence are open. Janet Foss of Chehalis, Washington, cuts her fresh blooms when just a few flowers are open (not more than one-third) but all the buds are colored. She has problems with shattering if they're left too long in the field. In Vermont, Ed Pincus cuts 2-3' main stems and then obtains additional side branches which he can cut or leave to develop the green pods. The pods eventually turn black. Either way, he notes, the foliage and the pods are quite attractive.

Pods start green and eventually turn black. Pods remain green longer in the South and on the West Coast because cool weather is slower to arrive. Not all inflorescences produce pods, so do not expect the same yield of fruit as flowers. Pods can be harvested when they are green, but better contrast between leaves and fruit occurs if they are brown to black. Waiting too long is not recommended, however, if the foliage is an important part of the "podded" seem. The foliage turns black in the fall and declines rapidly, at which time, put your falsies to bed.

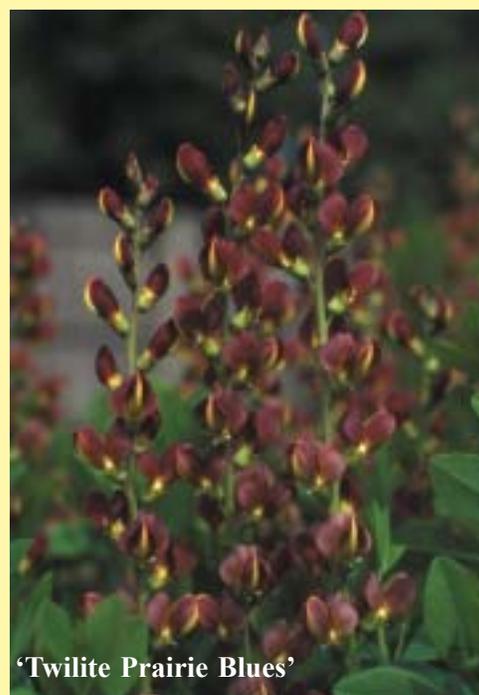
Postharvest

Growers who cut into a hydrating solution report postharvest life of 7-10 days. Warm water in the bucket is particularly recommended for baptisia.

Photos courtesy of North Creek Nurseries.



'Solar Flare Prairie Blues'



'Twilite Prairie Blues'



Cultivars

No cultivars of *Baptisia australis* are available; however, several hybrids have been released.

‘Carolina Moonlight’, a cross between *B. sphaerocephala* and *B. alba* is said to produce forty to fifty 18" spikes of buttery yellow flowers per plant.

‘Purple Smoke’ is a hybrid between *Baptisia australis* and *B. alba*, a white-flowered species, released by the North Carolina Botanical Garden in Chapel Hill. The smoky-blue flowers are held in upright inflorescences on 3' (90 cm) tall plants with gray stems. Mature plants may produce 50 stems.

‘Solar Flare Prairie Blues’, also from the Chicago Botanic Gardens, is considered a vigorous flowerer.

‘Twilite Prairie Blues’, introduced by Jim Ault at the Chicago Botanic Gardens, bears deep violet-purple flowers on 32" long. As many as 100 stems per plant have been reported.

Additional Species

Baptisia alba (white baptisia) is an exceptional species, laden with white flowers on black stems. Plants are more shade tolerant than *B. australis*, and earlier to flower. ‘Pendula’ is similar in flower but with pendulous seed pods. The nomenclature of the genus is mixed up, other white-flowered forms include *B. lactea* and *B. leucantha*.

Baptisia sphaerocarpa (yellow baptisia) has golden-yellow flowers on 2½-3' tall plants. Native to Arkansas and Oklahoma, plants are excellent choices for the western states. Tony Avent reports that his 2' tall, 4" wide plant has displayed over 130 flower spikes at once and the spikes are 12-15" tall. The many blooms give way to round seed pods rather than elongated pods.

Pests and Diseases

Leaf spots, powdery mildew (*Erysiphe*, *Microsphaera*), rust (*Puccinia*), and root rots are not uncommon.

Foliar nematodes (*Aphelenchoides* spp.) cause discolored spots on foliage that can worsen to leaf blight later in the season.



Grower Comments

“I have a patch of baptisia that is 6 years old. The original plugs were purchased and planted in our field before we had a well. I had heard it was drought tolerant and sure enough, it established itself and flourished without a lot of TLC.” Maureen Charde, High Meadow Flower Farm, Warwick, New York.

“I have grown *Baptisia australis* for 4 years, and I think it is a real winner. Not only can I sell the flower, but the foliage and seed pods are wonderful too. The plants ‘last forever,’ like peonies, and are natives in North America.” Pat Bowman, Cape May Cut Flowers, Cape May, New Jersey.



‘Twilite Prairie Blues’

“I don’t think this is typical but in ’06 I cut 970 stems and in ’07 870 stems from approximately 225 plants. I think my production is low as baptisia is a slow grower in these parts.” Tom Wikstrom, Happy Trowels Farm, Ogden, Utah.

“When baptisa is happy you can get over 20 stems a plant, if not, you might get none. I like the bright blue flowers. Personally they are not my favorite; what I really love are the seed pods, but the production is so low it has not been worth it for me for only 2-5 stems per plant.” Janet Foss, J. Foss Garden, Chehalis, Washington.

“My older plants (six years) yield about 25 stems per plant and will continue to produce new ones if I do not let them go to seed because it is so cool here most of the summer. My young plants have only about 5 or 6 but it increases every year.” Thea Folls, Folls Flower Farm, Auburn, New York.

“We get about 10-12 stems per plant on the *australis* that has been in the ground for six years. We never cut more than a third of the plant. The ‘Purple Smoke’ is about the same. ‘Carolina Moonlight’ and ‘Screaming Yellow’ don’t have quite as many stems yet but have been in the ground for only three years. The white produces the least amount for us right now simply because it has not had the most ideal conditions. We do also cut for foliage and fresh pods. The foliage and fresh pods should be cut only when the plants are very well hydrated. The foliage should not be used in corsages as it will not hold without hydration, we have proven this.” Sybil and Gary Calder, Sunrise to Sunset Gardens, Clayton, South Carolina.

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Steve Bogash and Alexandru P. Surcica

Weed Control in Cut Flowers

Due to the wide diversity of genus and species among materials known as cut flowers, managing weeds often requires different approaches depending on the specific weed, specific flower or woody stem, time of year and level of weed infestation. We are often trying to manage one weed while producing another for sale. Most growers use a combination of methods in order to increase soil organic matter and avoid the buildup of pest and pathogen populations. These methods can be loosely grouped under the headings: Preplant Soil Preparation, Cultivation and Hand Removal, Chemical/Herbicide, Barrier, and Flame.

First Things First

Preplant soil preparation can include any of the following: sequential cover cropping, fallow ground with burn or plow down, fumigation, and solarization. Cover crops are an excellent way to prepare the ground for cut flower production. This is especially true when you are taking ground from pasture or turf and trying to prepare it for production. Among the cover crops commonly used are cereal rye, buckwheat, rape, and various legumes. Each has inherent advantages and limitations that a grower needs to factor in prior to planting. For example: while cereal rye is an excellent smother crop that yields up #9,000 of dry matter per acre, will tolerate very late season planting, and does an excellent job of scavenging nitrogen, it can suppress the germination of direct-seeded flowers and can be difficult to work into the soil with small equipment. Once cereal rye is worked into the soil it is ideal for most

transplants and does an excellent job suppressing the germination of oxalis, chickweed and purslane.

Planting legumes is an excellent method to build soil nitrogen, increase soil organic matter and smother weed seedlings, but there is the potential to increase nematode, pest and pathogen populations. Also, too much nitrogen can cause flowering plants to produce excessive vegetation at the expense of flowers.

Fallowing ground, that is leaving it unplanted, is an excellent tool to use in reducing tough perennial populations. Regularly tilling any weeds that emerge or the application of a contact herbicide such as glyphosate, Gramoxone, Scythe, Racer (new, OMRI-approved burn down material), Finale, Reward or 20% acetic acid (heavy vinegar) will generally reduce tough weeds that are very difficult to control in a cropping situation.

High weed seed populations coupled with or without pest and pathogen problems may indicate a need to fumigate the soil prior to any planting. Properly managed fumigation will greatly reduce viable weed seeds. Although some fumigants are applied through drip irrigation, the handling and application of any fumigant material requires thorough training and is beyond the scope of this article. A good alternative to fumigation is solarization.

Soil solarization is a good low-input tool that accomplishes many of the same goals as chemical fumigation. By covering the ground with *clear* plastic after tilling and a good watering in the summer, you can reach temperatures in excess of 120F at 6-8" deep under the plastic. This combination of clear plastic which allows

weed seeds to germinate, and high heat to kill the seedlings can significantly reduce weed and pest populations. Unless purslane is your primary challenge as it seems to do just fine under clear plastic.

Cultivation for cut flowers is no different than the practices used in vegetable production with the added challenge of a high plant population to work around. Most cut flower growers are small (less than 2 acres) operations making rototillers of various sizes very practical for weed control. Hand weed removal may be the only option when working in tightly planted perennial cut flowers.

Chemical Weed Control

A number of pre- and post-emergent herbicides are labeled for use in cut flowers. See the table "Herbicides Labeled for Use Around Common Cut Flowers" in this article as a starting point in your finding the most appropriate pre-emergent herbicide(s). Example: zinnia growers have the option of using Surflan, Treflan/Preen, XL2G, Devrinol, and Pendulum 2G, as pre-emergent controls, and Envoy or Fusilade II, and Acclaim Extra as post-emergent control. With the large number of cut flowers that most growers plant, selecting a single pre-emergent material may be impossible, but with careful selection of chemicals, you may be able to get by with just a few.

Wick, brush and roller type applicators allow the use of non-selective herbicides such as glyphosate (Roundup, plus many others) in planted areas with minimal damage to desirables. Versions of these "wick" applicators can be found at many farm equipment suppliers and

many can be readily built on the farm. Wick applicators can use systemic or contact materials. Use herbicides such as glyphosate and Finale to control emergent perennial broadleaf and grass weeds. Contact/burn down materials like Scyte, Racer, Reward, Racer and 20% acetic acid (commercial processing grade vinegar) are excellent for cleaning up young weeds or “burning back” tougher weeds. Established perennials, woody plants and strong annuals are likely to come back when using just contact materials.

Authors' note: plans and descriptions for how to build your own wick applicator are due out in a new publication shortly.

Every farm seems to have its own specific combination of weeds that the owner/operator believes to be worse than those found in any other piece of ground anywhere. However, some weeds fit into a category of those that are just simply hard to kill.

A commonly used material like glyphosate has a very high number of dilution options based on the weed to be killed. Roundup Original (41% glyphosate) can be used at dilutions from .5% to 100% based on the problem at hand. Young, tender seedlings are controlled at very light concentrations while freshly cut woody stumps require 50-100% dilutions to prevent regrowth. Often, really tough weeds like poison ivy, *Rosa multiflora*, and thistle(s) require multiple applications in a single season for full control.

Some situations are best handled by using tank mixes of up to 3 herbicides applied at the same time. These mixes typically contain a burn down or contact type, grass pre-emergent and broadleaf pre-emergent herbicide. Many labels now have very specific instructions for tank mixing. Snapshot TG is a factory tank mix that provides pre-emergent control of some really tough weeds like knotweed, wood sorrel(s), field bindweed, datura, milkweed and morning glory. The rate of

The Cut Flower Quarterly

application of Snapshot TG varies with the weeds to be controlled.

Goal 2XL(oxyfluorfen) is a good option for woody stem producers since it is labeled for many tough to control weeds such as: horseweed, ground cherry, morning glory, nightshade(s), pepperweed, smartweed, thistle(s) as well as many other weeds. It has virtually no use in herbaceous cut flower production based on the current label.

Many of the pre-emergent herbicides available for use in cut flowers are formulated as granules since they were primarily designed for use in landscape and nursery situations. This allows the applicator to more easily apply granules under plants as compared with liquid sprays. With pre-emergent materials, it is always necessary to water the chemical into the soil for the material to work. Typically about an inch of water per acre is sufficient for this purpose. The very dry spring of 2007 resulted in very poor weed control in many situations since the herbicide never got watered in or had already volatilized by the time it rained.



Non-chemical Methods

Barriers such as colored plastic mulch are probably the most common method of cut flower weed control today. Most growers still use the standard black plastic. Research is still out at this time on any specific advantages of one color plastic mulch over another. Some experiments seem to indicate that red plastic results in longer stems, but that

effect rapidly wanes as the plant canopy closes. Plastic mulches offer a number of advantages to growers including earlier harvests, cleaner product and better use of irrigation water through trickle irrigation. The combination of plastic mulch in the planting row and straw in between will make for an easier harvest when things get muddy as well as reduce erosion from the row middles during heavy rains. The largest disadvantage is the plastic itself. Plastic mulches are a petroleum-based product and a disposal problem.

Flame weeding is useful for cut flowers only in fallowed areas. Growers seeking a non-chemical method of maintaining a clean fallow field may find flame weeding practical. Singeing seedlings with a quick burn will usually finish them off. If you do experiment with flame weeding, be sure to go after plants as young as possible. Don't try to burn the plant to the ground as a simple wash over the tender plant with flame is sufficient to damage tender plant cells, and be especially careful of setting fires in dry weather.

Developing a strategy for weed control in cut flowers is extremely important as the two best methods to reduce stem length and overall quality are to under-water or allow too much competition from weeds.

Special note: The comments herein on the use of chemicals are intended to assist growers in decision making and specific herbicide selection. Applicators are responsible for each material's label requirements, pesticide record keeping and pesticide safety practices. Pesticide labels provide substantial quantities of important information including rate, application methods and suggestions, tank mixing instructions, weed sensitivity and specific crop tolerances. Read any pesticide label thoroughly before use.

Steve Bogash is Regional Horticulture Educator and Alexandru P. Surcica is Research Assistant with Penn State Cooperative Extension. Contact Steve at smb13@psu.edu

| Herbicides Labeled for Use Around Common Cut Flowers | | Pre-emergent | | | | | | | | | | | | Post-emergent | | | | |
|---|-----------------------|---|----------------------------|---------------------------------|---|---------------------------------|--------------------------------------|--------------------------------------|-----------------------|---------------------------------|--------------------------------------|---------------------------------|---------------------------------|---------------------------------|--------|---------------------------------|---------------------------------|-----------------------|
| | | B A R R I C A D E | C O R R A L | D E V I N O L | D I M E N S I O N | G A L L E R Y | P E N D U L U M | P E N D U L U M | P R E E N | R O N S T A R | S N A P S H O T | S U R F L A N | S U R F L A N | T R E F L A N | X L | A C C L A I M | B A S G R A N | E N V O Y |
| Genus | Common Name | E | L | E | F | C | G | N | G | T | S | W | A | G | A | O | S | II |
| <i>Achillea</i> | Yarrow | A | A | R | A | A | | R | | R | A | A | A | A | R | | R | R |
| <i>Ageratum</i> | Ageratum | | A | A | | | R | | | | | | R | | | | A | A |
| <i>Antirrhinum</i> | Snapdragon | | | | A | | R | R | | R | R | R | R | R | R | R | R | R |
| <i>Aster</i> | Aster | A | A | R | | S | | R | | R | R | | A | | | | | |
| <i>Brassica</i> | Ornamental Kale | | | | | | R | | | | S | | | | A | | | |
| <i>Canna</i> | Canna | | | | | S | | | | | | | | | | | | |
| <i>Celosia</i> | Cockscomb | | | | | | | | | | | | | | | | | |
| <i>Chrysanthemum</i> | Chrysanthemum | S | | | A | | | R | | A | A | S | A | S | A | | A | |
| <i>Chrysanthemum</i> | Daisy | | | R | A | A | | R | | A | A | R | A | S | A | | A | |
| <i>Dahlia</i> | Dahlia | | | A | | A | A | R | | S | R | | A | | | | A | |
| <i>Delphinium</i> | Delphinium (Larkspur) | A | | A | | | | | | | | | | | | | | |
| <i>Digitalis</i> | Digitalis | | | | | | | R | | | R | R | | | | | | |
| <i>Echinacea</i> | Purple Coneflower | R | | R | R | R | | R | | | R | R | R | R | R | | | |
| <i>Eustoma</i> | Lisianthus | | | | | R | | | | | | | | | | | | |
| <i>Freesia</i> | Freesia | | | | | R | | | | | | | | | | | | |
| <i>Gladiolus</i> | Gladiolus | A | | | | A | | R | A | | R | | A | R | | | | R |
| <i>Gypsophila</i> | Baby's Breath | R | | | | | | R | R | | | R | R | R | R | | | |
| <i>Helianthus</i> | Sunflower | | | | | | | R | | | | | A | | | | | |
| <i>Iris</i> | Iris, Bulbous | A | | | S | | | R | | A | A | A | A | A | A | | A | |
| <i>Iris</i> | Iris, Rhizomatous | A | | | S | | | | | A | A | A | A | A | A | | A | |
| <i>Leucanthemum</i> | Shasta Daisy | | | | | A | | | | R | A | R | A | R | A | | A | R |
| <i>Liatris</i> | Gayfeather (Liatris) | | | | | | | | | | S | | R | R | R | | | R |
| <i>Lilium</i> | Lily | A | | | | A | | | | | | | | | | | | |
| <i>Limonium</i> | Sea lavender | | | | | | A | | | | | | A | | | | | |
| <i>Limonium</i> | Statice (ann.) | | | | R | | A | R | R | | | | A | | | | | |
| <i>Matthiola</i> | Stock | | | | | | | | | R | | | A | | | | | |
| <i>Paeonia</i> | Peony | S | | | | S | | | | | | | | | R | | | |
| <i>Papaver</i> | Poppy | | | | | | | | | | | | A | | R | | | |
| <i>Phlox</i> | Phlox | | | | | | | R | | | | | A | | | | A | |
| <i>Ranunculus</i> | Ranunculus | | | | | | | | | | S | R | | R | | | | |
| <i>Rosa</i> | Rose | S | | A | | S | | A | R | | S | A | A | A | R | A | | A |
| <i>Rudbeckia</i> | Black-Eyed Susan | A | | | R | R | | R | | R | R | R | R | R | R | | | |
| <i>Tagetes</i> | Marigold | | | | R | S | | R | R | | R | A | A | A | A | | A | A |
| <i>Tulipa</i> | Tulip | A | | | A | | | R | | | | | | | | | | |
| <i>Zinnia</i> | Zinnia | | | A | | | | A | R | | | R | R | A | R | R | | A |

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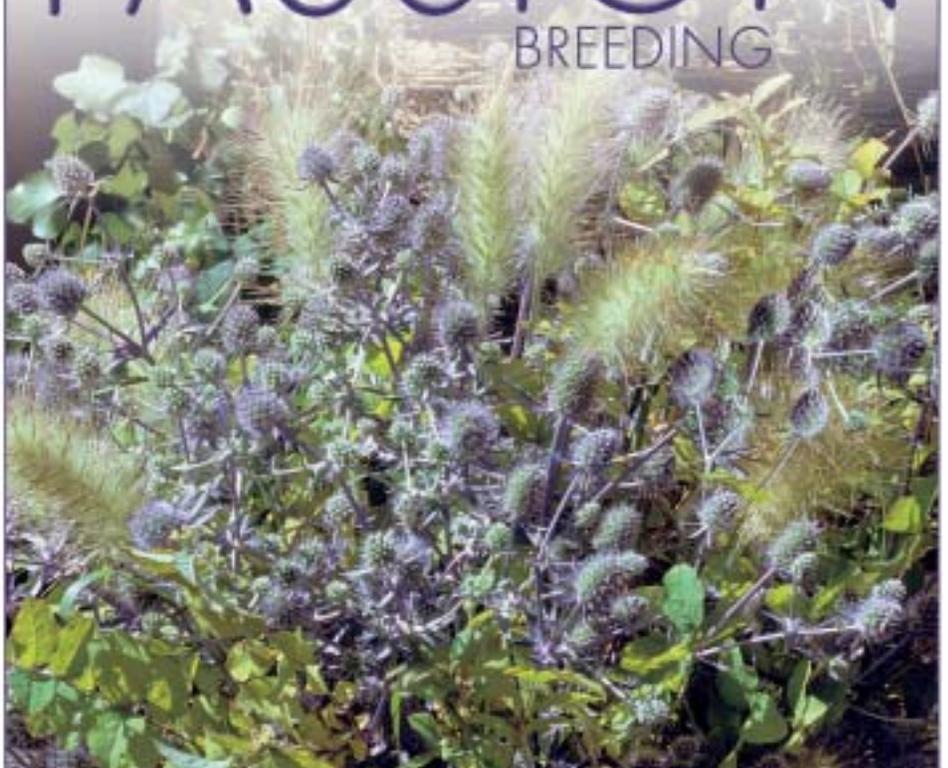


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INDUSTRY *Insider*

Bonnie Marquardt

Pack Trials Have Something for Everyone

What an amazing world we live in! Generations past would likely never fathom where we are today. The world has evolved with new technologies making for massive changes in our lives. While technology can make things easier and more efficient, the rate at which everything comes at us can be overwhelming. Simply put, business has always changed, but how we change with it is one of our measures of success.

If you've never taken the time to visit the California Pack Trials, perhaps this is the year to make a change and experience it. The event runs from March 29th through April 6th with participating companies setting their opening and closing dates within that time frame. The National Garden Bureau website, www.ngb.org, is a good source to check on specific dates for the participating companies. The trip along the California coast for Pack Trials is a valuable investment. You don't want to miss a vital event that could help grow your business.

Pack Trials is so much more than just finding out what new varieties are being unveiled. The only way to understand the amazing benefits is to experience it yourself. Prepare to have an intense week if you do the whole tour!

Traveling up and down the coast of California can be a treat in itself. Gilroy, Watsonville, San Juan Bautista, Salinas, Arroyo Grande, Lompoc, Santa Barbara, Carpinteria, Santa Paula, Somis, Oxnard, Bonsall, Vista, and Encinitas each have their own charm and personality. Is there any better excuse for visiting coastal California in early spring than on business? The entire route for the 2008 event comprises 34 companies. I don't want to overwhelm you, so allow yourself the options of a slower pace visiting either the Northern trials or the Southern Trials.

Pack Trials is a time for breeders and producers to showcase their new introductions along with their tried & true varieties. It is a time to educate industry specialists about products. This is your chance to spend time with the people who have the best understanding of the varieties they've created and grown. For years Pack Trials was about seeing the newest genetics. Today, a big part of the information shared is connected to marketing. The biggest trends in our industry can be seen during Pack Trials.

The amount of information received is endless, including catalogs, CDs, brochures, pamphlets and more. It's a time to re-connect with friends and colleagues, and to develop new contacts and friendships. It's a time to have intense discussions about products, ideas, and business opportunities. What you can attain in a week's time CANNOT be found anywhere else in the industry, including trade shows and conferences. Stunning displays created from mature plant material that is grown on site and hasn't been bumped and bruised by shipping, comparisons, hard goods, signage, and most importantly the opportunity to speak with the people who have

bred, grown and are most closely connected with their varieties.

My comments can only begin to describe what can be gained from the one change you make by taking time to visit the California Pack Trials...like I said at the beginning, you have to EXPERIENCE it yourself! The limitations are only what you make it. Hope to see you this year!

*Bonnie Marquardt is Flower Seeds Sales Manager
at American Takii.*

Contact her at bmarquardt@takii.com



This year's West Regional Meeting will be held April 4
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See Brenda Smith's Regional Report on page 61 for details.

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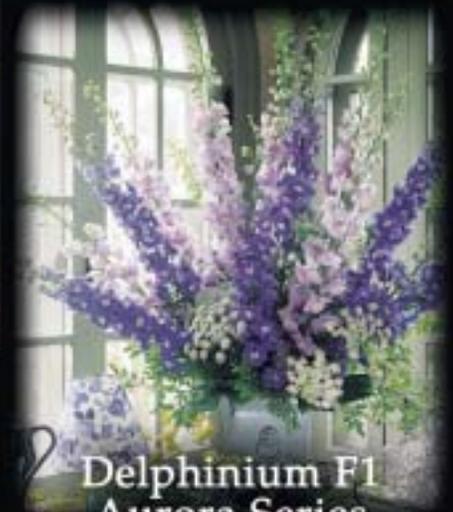
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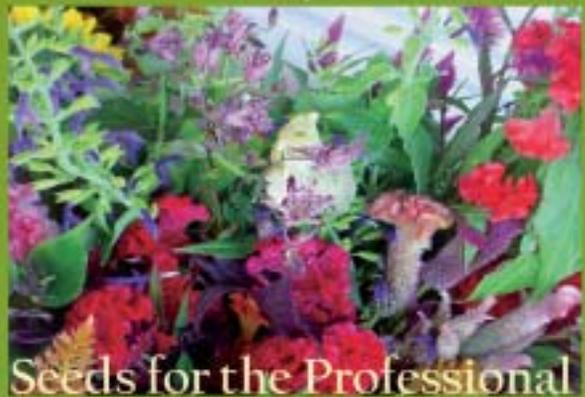
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SMALL Things Considered

Gay Smith

Change is Inevitable, Except from a Vending Machine

As you toast in the New Year, consider what changes and trends that will affect (or continue to affect) your business in 2008. Few will deny that a glass or two of bubbly tend to stimulate the creative juices, so might as well have a toast to your continued success as you read on.

Green-washing is likely the most obvious trend that will color 2008. It is impossible to read an advertisement or product label today without being assured that the contents are “green” and you’ve made the right choice to save the environment, improve your community, health, or state of mind by purchasing this item. Floral was a bit slow to pick up on the green-washing trend, but it’s safe to say the industry is fully on board as we zoom into the new year. The most compelling green aspect of production may be the interest in and popularity of certification programs.

Although many have been in place for more than a decade in South America, the concept is still finding its legs in the U.S. Keep in mind that *sustainability*—not *organic certification*—is the essence of green labeling programs in the floral industry. Certification programs in Colombia, Ecuador and Europe include FloraVerde, Sierra Eco, Flower Labeling Program (FLP), EurepGAP, Veriflora and Fair Trade. There are differences within each program, but all share a common goal of engaging in responsible environmental practices. Some of the

programs also focus on social and economic sustainability. Veriflora, monitored by SCS (Scientific Certification Systems), is probably the newest sustainable label program available to both Latin American and U.S. growers. Veriflora certification is the only program that requires a long-term commitment to organic crop production.

Is the surge in green interest a consequence of Al Gore’s “An Inconvenient Truth” or just the general public’s need for a more hopeful topic than the war on terror? Regardless, it’s

It is impossible to read an advertisement or product label today without being assured that the contents are “green” and you’ve made the right choice to save the environment, improve your community, health, or state of mind by purchasing this item.

impossible to miss the hype touting green, sustainable and organic products in venues as diverse as personal wellness products, Home Depot’s 2007 product label “Eco Options”, or Honda’s “Environmentology” campaign. All support clean and healthy environments for U.S. communities. Flower certification programs are not going away. The public is more comfortable purchasing products that carry a seal of quality because it reduces their risk and makes them feel like smart consumers.

More Stuff to Buy

SAF (Society of American Florists) has done some green-washing too. It has funded research and developed an entire marketing campaign on the advantages of having flowers as part of one’s lifestyle, because plants and flowers are proven mood elevators, air fresheners, productivity boosters, and offer spiritual healing. Flowers and plants are green by nature, so green-washing makes sense to a consuming public that needs compelling reasons to buy our goods.

A trend that continues to strengthen in the U.S. is the push to provide collateral materials with products. Collateral materials are widely used in Europe because they satisfy an information-driven customer base. Whether tiny bottles of olive oil are attached to

olive trees grown as patio plants, or planters are filled with sand colored to match the plant, they act as triggers to catch consumer interest and add value to the purchase.

Collateral materials for horticultural products are catching on in the U.S., too. My booth neighbor at a supermarket show this summer displayed plants with purse-size tubes of scented body lotions to match the variety of plant offered (e.g. lemon cypress lotion on potted cypress trees.) They explained that trimmings were saved when plants were groomed and then used to scent the lotion. The line was called “Scents Collection”. This grower offered another line with 3x 5" information booklets attached providing



care, plant history and recipe cards that featured dishes using their potted herbs. An individual leaf cleaner (cloth impregnated with Leaf Shine) is another example of collateral to upgrade foliage plants lines.

Flower suppliers are offering collateral materials as well. A good example is the California bouquet maker who patented a Kraft paper sleeve with rope handles. At the 2007 Hortifair House of Retail exhibition, display after display gave visitors ideas on packaging methods to satisfy a variety of customer needs: packaging with handles to simplify the “carry” half of the “cash and carry” equation, luxury wraps as a way to sex up the single stem sale or convey a specific message the flowers deliver, displays that provide information on how to make the best product selection for the occasion or home environment and various ways to enjoy the product. The take-home message in the House of Retail: if your packaging lacks product ideas or information, is not convenient to handle, walk away with or understand—it won’t fly.

Another trend that continues to dominate retail sales and marketing campaigns is “lifestyle”. Know the ten commandments of lifestyle and take advantage of any of them at every opportunity. They are as follows: Exclusivity; Unique therefore distinguishable; DIY; Make it easy and convenient; Honesty; Customers want information at every step of the chain; Focus on wellness; Demand for quality; Close to nature and back to the roots; and I want it my way.

Recycle, Reduce, Reuse

What about changes in product handling? With water costs rising around the U.S., more attention is being paid to the number of times solutions can be reused effectively. Making simple changes in handling protocols helps defray costs. An example is STS. The hassle of neutralizing STS (as well as the increase in the costs of silver) has led growers to make subtle changes in the way the product is applied. Since stems pull solution from the bottom, reducing the depth of STS in buckets is a cost-effective way to reduce the amount left to neutralize. By the time the solution is spent, the flowers have essentially sucked the bucket dry.

One handling change you may consider is the reuse of hydration solutions. It is an efficient way to reduce not only treatment cost, but also water and labor costs. An article by Karen Robb, Julie Newman and James Bethke in Vol.11, 2007 summer issue of *CORF News* gave compelling insights on postharvest changes that improved the bottom line. According to their surveys, all the California growers interviewed reported that although changes in their postharvest handling procedures increased their direct costs, these costs were more than offset by reduced credits.

Examples cited were:

- Using STS for ethylene-sensitive crops.
- Switching from non-cooled to refrigerated delivery trucks.
- Bunching flowers under cool (50-60F) conditions instead of in greenhouses (85-90F) not only improved flower quality, but increased worker productivity from 35 to 130 bunches per hour per person.
- Having third-party inspections to verify that flowers meet the requirements of supermarkets helped reduced shrink and increased crop quality, while fewer credits were received resulting in more satisfied customers.

Consumers are getting smarter and supermarket buyers more demanding, all of which require growers to pay closer attention to correct handling methods. In many cases, customers (supermarket buyers at least) are presenting specific codes of practices to growers as a means of ensuring consistent quality. Another innovation changing the way flowers are treated includes flower-specific treatments applied at both grower and consumer level. Emphasis is now on developing solutions targeted to treat specific needs of various flowers, thereby proving the extra boost needed to maximize genetic potential.

It will be interesting to see what changes move our industry forward in 2008.

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Cultural Practices Studies with Cut Flowers, 2007

Sunflower Daylength Screening Test

Executive Summary: Sixteen sunflower varieties were screened for their reaction to daylength during the seedling stage. Six showed no reaction in time of flowering or plant size, four showed to be slightly short-day in reaction, and 5 were classed very sensitive, with more than 14 days delay in flowering when exposed to long-day conditions. Short-day sensitive varieties displayed the formation of axillary buds in the upper leaf nodes when exposed to short days in the seedling stage, a feature which detracts from their appearance.

Many sunflower varieties used as cut flowers are sensitive to daylength. In our 2006 screening trial, 11 varieties out of 25 flowered in an average of 53 days

If you plan to produce an early crop in a high tunnel, and expect to have them flowering by early June, knowing the daylength reaction of the variety will be important.

when exposed to 12 hours daylength in the first 3 weeks after emergence, compared to 70 days if grown under 16 hour days in the same period. The current trial was conducted to expand the list of varieties tested, and to confirm the results of the previous year.

Materials and Methods: Seeds were sown in 72-cell trays, placed in either a 12 or a 16-hour daylength in a greenhouse at seedling emergence, and transplanted to the field 3 weeks later. Field conditions consisted of 4-row beds with 9 x 9 in. spacing, black plastic mulch and trickle irrigation. The experiment was conducted three times, sowing May 15, June 15 and June 29. There were 24 plants per plot, although some plots had fewer plants due to poor germination.

Results and Discussion: As in 2006, the sunflower varieties showed varied reaction to the daylength manipulation during the first three weeks of growth.

Varieties were categorized as day-neutral, slightly or strongly short-day and slightly long-day in their daylength response, and the plant attributes measured followed the expected patterns (Table 1). Later flowering, due to daylength reactions, allowed more vegetative growth, taller plants and larger flowers.

These results imply that daylength sensitivity should not be a concern if you are growing sunflowers only during the summer in North America. However, if you plan to produce an early crop in a high tunnel or in a state with mild winter climates, and expect to have them flowering by early June, knowing the daylength reaction of the variety will be important. Such a crop would be in the sensitive seedling stage in early April, when daylength would be close to 12 hours. ‘Sunrich Orange’, for instance, would flower early, with short stems, small flowers, and ugly flower buds near the flowering head, as shown in Figure 1. To avoid such problems, choose daylength insensitive varieties, or extend the daylength to 16 hours using artificial light for the first three weeks after emergence.



General Information: The studies described below were conducted at Cornell University, at its East Ithaca research farm, where the soil consists of an Arkport sandy loam soil. The fields in which these experiments have been conducted have received yearly additions of compost. The high tunnel is in its fourth production season. It was obtained from Rimol, Inc., and has dimensions 98 ft. long, 32 ft. wide and 15 ft. high at the gables. It is covered by a single layer of clear polyethylene to which IR blocking compound has been added. The flowers were grown in beds 40 in. wide, and about 4 in. high, spaced about 6 ft. apart and covered with black polyethylene plastic. These were irrigated by two trickle irrigation lines. Unless otherwise stated, plants in the experiments were grown in 4 rows 9 in. apart, and plants spaced 9 in. apart in the row.

Table 1. Reaction of 16 varieties of sunflower to daylength treatments applied during the first 3 weeks before transplanting on days to flower, plant height and flower diameter.

| Daylength sensitivity type | No. of varieties | Days to flower | | Plant height, in. | | Flower disk diameter, in. | |
|----------------------------|------------------|-----------------|----------------|-------------------|----------------|---------------------------|----------------|
| | | Short daylength | Long daylength | Short daylength | Long daylength | Short daylength | Long daylength |
| Day neutral | 6 | 62 | 62 | 43 | 44 | 2.5 | 2.6 |
| Slightly sensitive SD | 4 | 56 | 64 | 35 | 43 | 1.9 | 2.7 |
| Strongly sensitive SD | 5 | 52 | 70 | 28 | 45 | 1.8 | 2.9 |
| Slightly sensitive LD | 1 | 70 | 62 | 55 | 46 | 3.3 | 2.7 |

The results of these trials compare well to those conducted in 2006 (see article in Jan. 2007 *Quarterly*), and confirm the photoperiod reaction of varieties tested in both experiments (Table 3).

Table 2. The effect of seedling photoperiod on flowering date, plant height and flower disk diameter for 16 sunflower varieties, arranged in alphabetical order.

| Variety | Days to first flower | | Plant height, in. | | Flower disk dia., in. | |
|--------------------------|----------------------|------|-------------------|------|-----------------------|------|
| | 12 h | 16 h | 12 h | 16 h | 12 h | 16 h |
| Orange Glory | 53 | 73 | 28 | 46 | 1.6 | 2.8 |
| Orange King | 57 | 71 | 42 | 57 | 2.5 | 3.7 |
| Premier Lemon | 44 | 62 | 13 | 31 | 1.2 | 2.0 |
| Procut Apricot Lite | 62 | 64 | 42 | 44 | 2.0 | 2.1 |
| Procut Bicolor | 70 | 62 | 55 | 46 | 3.3 | 2.7 |
| Procut Early Orange | 52 | 61 | 33 | 41 | 1.8 | 2.6 |
| Procut Lemon | 60 | 62 | 40 | 41 | 2.4 | 2.5 |
| Procut Orange | 55 | 62 | 35 | 41 | 1.9 | 2.7 |
| Procut Peach | 63 | 63 | 47 | 47 | 2.4 | 2.6 |
| Procut Peach Blush | 62 | 61 | 48 | 48 | 2.5 | 2.5 |
| Procut Red/Lemon Bicolor | 62 | 62 | 37 | 38 | 2.8 | 2.7 |
| Procut White Lite | 58 | 69 | 32 | 44 | 1.8 | 2.6 |
| Procut Yellow | 58 | 65 | 39 | 47 | 2.0 | 3.0 |
| Procut Yellow Lite | 63 | 62 | 46 | 46 | 2.7 | 3.1 |
| Sunrich Orange | 53 | 74 | 30 | 49 | 1.8 | 3.1 |
| Tosca | 51 | 68 | 28 | 44 | 1.8 | 2.9 |



Although at first thought it would seem advantageous to have plants flower earlier after planting, nearly all the daylength-sensitive varieties produced ugly small flower buds in the axils of the upper leaves when given short days during the seedling period (Fig. 1). This was true of both the slightly sensitive and strongly sensitive short-day varieties, except for ‘Procut White Lite’. ‘Procut Bicolor’, which is categorized as slightly long-day sensitive, did not show axillary bud formation under long-day conditions, indicating that this characteristic is not absolutely linked to daylength reaction.

Fig. 1. ‘Sunrich Orange’ flower after short day treatment for the first 3 weeks during seedling growth. Note prominent axillary bud in an upper leaf node.

Table 3. Classification of 37 sunflower varieties according to their seedling response to daylength, as determined in experiments in 2006 and 2007. Varieties are arranged in alphabetical order in each column.

| Day neutral | Slightly sensitive, short day | Strongly sensitive, short day | Slightly sensitive, long day |
|--------------------------|--|--|---|
| Florenza | Chianti | Moonbright | Double Quick Orange |
| Full Sun Improved | Procut Early Orange | Orange Glory | Procut Bicolor |
| Procut Apricot Lite | Procut Orange | Orange King | |
| Procut Lemon | Procut White Lite | Premier Lemon | |
| Procut Peach | Procut Yellow | Premier Light Yellow | |
| Procut Peach Blush | Valentine | Premier Yellow | |
| Procut Red/Lemon Bicolor | Solara | | |
| Procut Yellow Lite | | Sunbright | |
| Procut Yellow Lite | | Sunbright Supreme | |
| Ring of Fire | | Sunny | |
| Sonya | | Sunrich Gold | |
| Soraya | | Sunrich Orange | |
| Strawberry Blonde | | Sunrich Orange Summer | |
| The Joker | | TH 472 | |
| | | Tosca | |

Chris Wien is Professor of Horticulture at Cornell University.

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Graduate assistant Joyous Tata conducted the sunflower petal abscission experiment reported here.

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IPM Update

Stanton Gill and Shannon Wadkins

Leafminer—Artistic but Detrimental



Leafminer on gerbera daisy

One or two leafminers in your cut flower foliage is really no big deal. Actually, you could call the serpentine mines “artistic” and convince your customer it adds character to the cut stem. Double, triple or quadruple this damage level and you have a problem on your hands. Leafminers and their accompanying damage are often a problem for cut flower growers producing greenhouse-grown cut stems. Rarely do I see it as a major problem in field situations. Well, here we are in the dead of winter and if you are producing cut flowers at this time of year they are probably growing inside a greenhouse. So let’s talk about strategies to deal with leafminers.

First off, if you are growing gerbera daisy or aster you are susceptible to leafminer. The most common leafminer pests of greenhouse crops are tiny flies in the insect family Agromyzidae, which can cause serious losses, especially on asters, gerbera, mums, and gypsophila.



Leafminer pupa on matsumoto aster

Low populations of leafminers cause a little aesthetic damage to cut flowers leaves and can be tolerated by most growers. Heavy infestations reduce rates of photosynthesis, make the foliage unattractive to your customers and may stop a sale from happening. Damage is caused in two ways. First, small leaf punctures are made by egg-laying adult females, who feed from these punctures and sometimes lay an egg within them. Each puncture leaves a white speck, which, when numerous, are unsightly.

The larva (maggot) that emerges from the egg feeds within the leaf. As it tunnels through the leaf, it produces the unsightly, typically meandering mines that give the pest its collective name “serpentine leafminers”. The mine becomes wider each time the maggot molts to the 2nd instar.

The serpentine leafminer, *Liriomyza trifolii* (Burgess), is one of the most common leafminers growers run into on cut flowers in a greenhouse. It infests many floral and vegetable crops, particularly species within the Compositae. Gerbera daisy, chrysanthemum, and gypsophila are favored hosts.

It can often be confused with the vegetable leafminer, *Liriomyza sativae*. These two pests attack many of the same crops, but *L. sativae* does not infest chrysanthemum, which is a major plant host of *L. trifolii*.



Adult leafminer

Identify the Adult

Adult *Liriomyza trifolii* appears generally paler in color, and the top of the thorax is grayish, rather than shiny black as in *L. sativae*. Also, *L. trifolii* has a large area of yellow behind the eye, with two stout bristles both arising from this yellow area, while one of the two bristles of *L. sativae* arises from a small black area, and the other arises from a yellow area. The larvae are bright yellow.

Life Cycle of the Leafminer

Females cut a small hole into the upper surface of leaves using their toothed ovipositor. Often the female will feed on the plant juices that well up in the wound hole. Females will make several holes but oviposit only into select holes in the leaf surface. Males will feed from the holes in leaf surfaces created by females. Both males and females will feed on flower nectar for energy for flight and mating. Eggs are deposited into leaf tissue. Eggs hatch and larvae feed in the mesophyll of the leaf. The larvae develop through 3 larval instars with pupation occurring within the leaf. In the late stages of the 3rd instar, the larva cuts a crescent-shaped hole into the leaf. The larva then migrates out of the leaf hole and drops to the ground where it pupates. Some pupae have been observed pupating by hanging out of the leaf hole.

Monitoring - What to Look For and How to Control This Pest

Examine foliage for serpentine mines. Again, one or two mines on one or two plants in a greenhouse is probably no big deal. But if you detect mines on several leaves or on several plants take action quickly or you will have a 'blazing fire' situation. Place one sticky card for every 500 sq. ft. of growing area. Examine cards at least once a week for presence of adults. The insecticide Avid (abamectin) is translaminar and will give fairly good control of leafminers. The two systemic insecticides TriStar (acetamiprid) and Safari (dinotefuran) can be used to control larvae. Adults can be knocked down with Astro (permethrin).

If you stay on top of this pest life will be great. If you let it go, it will turn into a major pest that you have to deal with.

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Leafminer oviposition injury on Matsumoto aster



Adult leafminers on Matsumoto aster



Leafminer infestation on gerberas

RESEARCH *Update*

Megan Bame

Funding for this column is provided by the ASCFG Research Committee.

Potassium Options for Organic Production

Robert Mikkelsen, of the International Plant Nutrition Institute, recently reviewed the importance of potassium for plant growth and development, the typical need to supplement potassium in the soil, and the sources of potassium for organic growers. He acknowledged that there are numerous regulatory agencies, each with slightly different interpretations of what meets the standards for organic production. In addition to adhering to the organic standards of your production location, availability of source material and concentration of potassium available from each source are also considerations.

Potassium is the soil cation required in the largest amount by plants for overall health and vigor. Potassium is involved in these physiological plant functions:

1. Osmoregulation
2. Internal cation/anion balance
3. Enzyme activation
4. Proper water relations
5. Photosynthate translocation
6. Protein synthesis
7. Tolerance of external stresses, e.g. frost, drought, heat, high light intensity
8. Reduced stress from disease and insect damage

Since farmers in many regions of the United States remove more potassium from the soil during harvest than is returned to the soil with fertilizer and manure, the nutrient is eventually depleted.

Even with supplemental potassium added to the soil, the availability of the nutrient is based on its solubility. Soluble minerals include langbeinite, sylvinitite and potassium sulfate. Manures are also highly soluble, but the nutrient content may vary considerably. Some potassium supplements are less soluble, but they can serve a long-term role in building soil fertility. The following outlines several

potassium sources that have been labeled “allowed” or “restricted” use for organic production by the USDA’s National Organic Program.

Langbeinite: Langbeinite is actually potassium-magnesium sulfate, typically supplying 18% potassium, 11% magnesium and 22% sulfur—all available for plant uptake. It is allowed for organic production in its raw, crushed form. Langbeinite is found in underground deposits in New Mexico.

Potassium Sulfate: Generally containing 40% potassium and 17% sulfur, potassium sulfate is allowed for organic production so long as it is derived from a natural source and free from additional processing or purification. The Great Salt Lake in Utah is one source of potassium sulfate produced for organic use.

Sylvinitite: Unprocessed sylvinitite, potassium chloride, contains 17% potassium. Because the applicator must be careful to minimize the chlorine accumulation in the soil, consultation with an organic certifying agent should precede application. Processing removes sodium salts, but moves this potassium source to the restricted list.

Manure and Compost: Depending on the raw material and handling, manures and composts are extremely variable in their potassium content. A chemical analysis will allow these resources to be managed for maximum benefit to the soil and the crops. Potassium from manures and composts are typically available for plant uptake.

Greensand: Potassium is derived from the green mineral, glauconite, found in a sandy rock or sediment commonly called “greensand.” Potassium content of greensand is up to 5%, but the release rate is very slow. While some view the slow release as a management tool to avoid fertilizer burn, the slow rate doesn’t provide significant nutritional benefit to the plants growing at the time of application. Greensand is mined in New Jersey.

Rock Powders: Ballast, biotite, mica, feldspars, and granite are mined rocks that are known to contain varying amounts of potassium. Since some have such a slow release rate, they are only useful for long-term soil management, not readily available plant nutrition. In addition to insoluble properties, these minerals are often heavy and bulky to transport.

Seaweed: Seaweed biomass contains less than 2% potassium and is readily soluble. Seaweed can be applied directly or the potassium can be extracted. Transportation costs for farms that are not located in proximity to the harvesting area may be prohibitive considering the potassium content.

The key to maintaining sufficient potassium availability in the soil is by conducting regular soil tests. If potassium is deficient in the plant root zone, problems such as poor water use efficiency, increased pest problems, reduced harvest quality and lower yields may result.

Mikkelsen, R.L. 2007. *Managing Potassium for Organic Crop Production*. HortTechnology 17(4) pp.455-460

How Greenhouse Sanitation Affects Insect Management

Greenhouse sanitation includes the timely removal of weed, plant and growing medium debris. Previous research has focused more closely on the impact of sanitation on reducing the incidence of plant diseases; however, the researchers at University of Illinois, Urbana, recognize that sanitation is also important in reducing insect infestations, namely by removing the insects' breeding and hibernating sites. Their research efforts worked to quantify the abundance and types of insect pests emerging from plant and growing medium debris disposed of within the greenhouse.

Two commercial greenhouse and two university greenhouses were evaluated in the study. The four greenhouses offered a diversity of plant material and varying levels of production. Two trash cans were placed in each greenhouse. Each trash can lid was equipped with a binder clip to hold a 3 x 5 yellow sticky card on

the interior of the closed container. The greenhouse debris was collected weekly for 28 weeks from May through November. The sticky cards were also collected and replaced weekly. The insects on the cards were identified and the number of each type of insect was recorded for later analysis.

The most common insects identified from the four greenhouses were western flower thrips, whiteflies, and fungus gnats. Based on the plant material being grown in the greenhouses, the insect types identified were not surprising. When they analyzed the plant material according to type, and compared it to the percentage of adult insect captured on the card, they were able to conclude that only a small quantity of plant material can harbor large numbers of insect pests. Additionally, with a 1-week time period between debris removal, it is possible that pupae of

western flower thrips, fungus gnats and whiteflies can develop into adults. Without the presence of a tight-fitting lid of the trash container, the adult insects may migrate to otherwise healthy or treated crops in the greenhouse.

The best defense is to remove plant and growing medium debris from the growing area for proper disposal. If trash containers are used in the growing area, be sure a tight-fitting lid is available and used. In addition to reducing the incidence of insect problems, proper sanitation can also lead to a decreased need for insecticides or the introduction of natural insect enemies.

Hogendorp, B.K., and R.A. Cloyd. 2006. *Insect Management in Floriculture: How Important is Sanitation in Avoiding Insect Problems?* HortTechnology 16(4) pp. 633-636.

Prolonged Vase Life of Lupinus havardii

Though *Lupinus havardii* may be a promising cut flower with its spike of blue flowers, its use may be limited due to its high sensitivity to ethylene. Naturally occurring ethylene synthesis begins occurring when the flower has been open for 2-3 days. This initial ethylene synthesis begins in the oldest, basal flowers first, before the flower stem reaches harvestable size. Once harvested, the process continues, leading to desiccation and abscission of the flowers beginning at the base of the raceme. A collaborative research effort among universities in Mexico, New Mexico and Texas evaluated the affect of treating lupine flower stems with 1-methylcyclopropene (1-MCP). They analyzed fresh weight and flower retention, apical flower opening and vase life longevity.

L. havardii 'Texas Sapphire' was grown in the greenhouse production environment. Racemes were harvested at 112, 130 and 138 days after transplanting. At the time of harvest, no senescence-related desiccation was evident. All cut stems were 40-55 cm

The Cut Flower Quarterly

(16-22 in) long with 20-30 fully opened flowers. Fresh weight and number of fully opened flowers was recorded immediately after cutting each stem.

Twelve hours after harvest half of the stems were treated with 1-MCP at a concentration of 160 nL/L, held at 20C for 12 hours. The remainder of the stems did not receive the 1-MCP treatment. The stems were immediately moved to a vase solution containing 50iM of (2-chloroethyl) phosphonic acid (CEPA). The CEPA solution simulated postharvest exposure to exogenous ethylene. Treatments were held in the CEPA solution or deionized water for 2, 4, or 6 days. After the treatment time, the stems were moved to vases containing deionized water for further evaluation. Vase life was measured beginning at the time of harvest, ending when 50% of the mature flowers abscised or wilted.

The longest vase life (8 days) was reported for lupine stems that were treated with 1-MCP, but were not exposed to CEPA. Only a three-day vase life was reported in the absence of a 1-

MCP treatment, but with 6 days in the CEPA solution. Only mature flowers that were present at the time of harvest experienced desiccation within 6 days; however the desiccation resulted in up to a 70% loss in fresh weight and visible wilting. Postharvest 1-MCP treatment was shown to delay desiccation, mature flower drop and newly opened flower drop by 2 days. The prolonging effects of 1-MCP were best observed in this experiment when the flowers were exposed to the exogenous ethylene, but the data also suggest some suppression of endogenous ethylene as well.

Valenzuela-Vazquez, M., G.A. Picchioni, L.W. Murray, and W.A. Mackay. 2007. *Beneficial Role of 1-Methylcyclopropene for Cut Lupinus havardii Racemes Exposed to Ethephon.* HortScience 42(1) pp.113-119.

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GROWER *Profile*

Megan Bame

Roy and Linda Doan Aunt Willie's Wildflowers

Roy and Linda Doan started with a vision for Aunt Willie's Wildflowers several years ago, but it was only in the past two years that all their planning and research came to fruition. Their vision was to not only grow and sell specialty cut flowers, but to also share a unique, on-farm experience through flower arranging workshops at their century farm.

When they were finally ready to give it a go, they started at the Kingsport Farmers' Market. In their first week, they made \$32 and were thrilled. There was only one competitor, who in addition to selling plants, sold Ball jar bouquets for \$4. She brought only 12-15 jars each week and would sell out quickly, leading other shoppers to Aunt Willie's booth. In the first year, Linda set her prices at \$5, \$6 and \$7, based on her competitor's pricing, even though the \$4 bunches didn't include any specialty cuts. By the start of their second season, with encouragement from ASCFG members, she raised



her prices to reflect her product, selling bouquets for \$8, \$10 and \$12. At peak they prepared 70-75 bouquets each week for the Saturday market.

While they enjoy interacting with their customers at the farmers' market, Linda explains, "We'd like to be able to focus more on events and less on the market just because the market is harder work—more flowers, more time bunching, more hauling, you all know the drill." She goes on, "We'd like to be able to still make a profit when we're too

old to do the labor-intensive stuff. Events are hard work too, but we think we can tailor those more to our abilities."

Roy is recently retired from his first career as a high school math teacher, while Linda has one more year until her retirement from Milligan College where she chairs the exercise science department and is an instructor of wellness and physical education. The couple was considering some sort of venture that would provide supplemental income as they entered retirement. While they tossed around the idea of opening a bed and breakfast, they eventually decided that they didn't want to put up with the demands of a service industry. Instead, they settled on a venture that would incorporate Roy's love of growing things, Linda's love of flowers, and their mutual desire to share the nostalgia of their farm.

As with any relatively new growers, Roy and Linda are still on a learning curve. They've enlisted help from local college kids when clearing beds that were once covered by poison ivy and blackberry bushes. They are still working diligently on building the soil. They first added composted horse manure, but later realized that was a mistake due to the abundance of weed seed that accompanied it. Now they are relying on composted chicken litter and cover crops, which they hope will assist with weed management as well. Weeds are a time-consuming challenge that have led them to using plastic mulch on some crops. Linda recalls, "Last year we went on vacation for a week, and when we came back the weeds were beyond our control, we just gave up on fighting them." The drought was a challenge as well, and prompted them to add irrigation. Using his farming experience, Roy handles the tasks of bed preparation, soil and fertility management, and the planting schedule.

Rather than grow the business in acres, they are more focused on continuing to learn about growing flower and finding efficiencies that will save labor and generate more profit. A few examples include growing their own plugs, better managing multiple plantings, and finding the flowers that grow best for them. They were particularly pleased in their second year after choosing flowers that were recommended by the ASCFG.

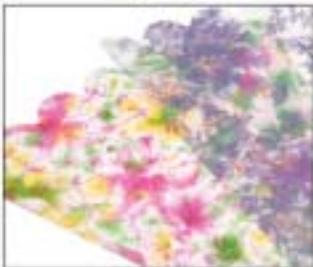
They have a homemade hoop house and plan to utilize it more this year. They don't see a greenhouse in their future, though, deducing from their talks with fellow growers that the hoop houses offer the most profit for the space and the Doans don't really have a desire to grow year-round. Their season kicks off with a Mother's Day workshop on the farm, followed by Saturdays at the Farmers' Market from the end of May through the end of August. They host more workshops at the farm in June and July on Tuesday evenings—a day that is farthest from the market, and a time when they might find some relief from the summer's heat.

But Linda's favorite time of year is fall and she's sure to plant a few items especially for the late-season events. This year, they grew 'Purple Majesty', pearl and highlander millets; Texas black, black amber and red broom corn; several varieties of pumpkins, amaranths, celosia, ornamental peppers and several grasses in addition to the traditional summer assortment.

They had good success with lisianthus, 'Amazon Neon Duo' dianthus, 'Indian Summer' rudbeckia, larkspur, sunflowers, zinnias, single tuberose and 'Rocket' snapdragons used for mixed bouquets. However, they also feel that they've developed a signature flower that aptly reflects the image of Aunt Willie's Wildflowers. Every market, Linda takes a few bunches of pink sweet peas that she's gathered from the ditch. She sells the bunches for \$5 each, and while she doesn't always sell out, she always draws in customers who reminisce about their grandmother and their memory of those flowers.

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A former student from Milligan College helped Roy and Linda build a beautiful website, www.auntwillieswildflowers.com. Linda plans to take a course in website design so that she can maintain the site. Also, on the advice of Joe Caputi at the National Conference in Raleigh, the Doans are looking to develop a logo and signage that will help direct folks to the website.

They do have a collection of woodies as well, including 'Limelight' and 'Tardiva' hydrangea, red twig dogwood, viburnum, forsythia, mock orange, lilac and spirea. They'd like to add varieties that could be the focus of an event, be exhausted in a single evening and then done with until the same event next year.

Linda calls the ASCFG Bulletin Board her pipeline to information. She claims, "Anything we've learned, we've learned from ASCFG members whom we try to visit anytime we're traveling. We get out the directory, look at our map and call to see if we can stop along our way, though we try not to be intrusive...or show too much of our ignorance." In early December, for instance, they visited Andrea Gagnon, of LynnVale Studios in Gainesville, Virginia. Linda helped Andrea make wreaths all day, all the while learning as much as she could from Andrea's wealth of experience.

What they have a firm grasp on is what they want the Aunt Willie's

experience to be. In fact, one of their guest may have summed it up best when she wrote, "When I got home, I said to myself, I'm going to slow down and really take time to enjoy life." Linda and Roy want their participants to take away more than flowers, though of course they depart with flowers in hand.

The Doans realize that part of the appeal is to get out in nature and enjoy the beauty of the outdoors. But they want to offer a touch of pampering as well. Linda serves light refreshments, namely cookies decorated to mimic Aunt Willie's old hats. At each place setting, she includes a miniature vase of posies that immediately thrill the workshop participants as a take-home gift. To Linda, it's a \$0.57 vase, to the participants, it's a small touch that will help them carry the experience with them and perhaps inspire them to return.

Roy's Aunt Willie died in 2001 at the age of 92, but her spirit lives on as others look to recapture or perhaps glimpse a

bygone time. The 220-acre farm includes the family homeplace, built in 1860, Aunt Willie's home, built in 1940 and several old outbuildings that complete the farmstead. Roy and Linda added their own home to the property in 2000 and in addition to growing flowers on one acre, they raise grass-fed beef cattle—a product that appeals to the same market.

The Doans have embraced the past and found mementos that help visitors connect to a simpler life. The "bloomin' events," the collective name for Aunt Willie's workshops, are held at Aunt Willie's house where treasures on display include Aunt Willie's journal from 1940 listing the flowers she planted, a 1926 flower collection from Roy's father's school days and a flower press he might have used.

While in just a short time, the Doans feel like they have come a long way, they look forward to building on their strengths, continuing to emphasize history and nostalgia through a unique floral experience.



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REGIONAL *Reports*



NORTHEAST
Polly Hutchison
Robin Hollow Farm

As I write this missive, my hands are scratched and sore from wreathmaking. But you are reading it in the promising, magical January days where dreams of the perfect season start to become reality, so I will leave the present behind. I am very pleased and honored to be your incoming Regional Director. Chas did a great job, and he left some large and muddy shoes for me to sh slump around in.

This issue is filled with some of our favorite reading—the Seed Trial Reports—and I am happy to say that last year’s Trial had some really good varieties (at least on my little farm). Speaking of last year, I did some independent foliage trials, and my favorite from that was the *Alternanthera* ‘Purple Knight’, which I grew from seed. It is a “Fantastic Foliage” selection. I started it in March in the greenhouse, bumped it up to a 128-cell tray in mid April, and kind of neglected it for a while because it didn’t look like much (I know that never happens at your place...) so it didn’t go out to the field until late June. Despite this, it grew really well and I cut upwards of 1200 stems off of about fifty plants, spaced about 8 inches by 12 inches in three rows. Stem length was 16-19 inches.

It just cranked out, and we didn’t have that hot of a summer here in New England. There was a little wilting if the stems were too young, so I cut heavily in one area, and rotated around the patch over a couple of weeks to get more mature stems. Nothing ate it. No diseases. For postharvest, I cut into water and held in preservative, but I also used plain water in the later part of the season and it held well. It does turn the water a bit pink at first. Stems are really dark and I used it a lot in mixed bouquets, especially with those late summer dark reds and oranges. I also sold a fair amount as straight stems to market customers. It has this really lovely metallic shimmer in the sun. It held up for about a week in Oasis as well. What’s not to like? It is definitely an annual, as the first frost brought it down to a stemmy mush, so in more northern areas you might not want to leave it the tray as long as I did.

Since my main duties are this column and Regional Meetings, I have been thinking quite a bit about content and sites for the next couple of meetings. I would love to host you all in my little state by the sea, and I would also like to hold a meeting in upstate New York, to be more convenient to the northwestern Northeast Region, and to showcase some members up there.

Sadly, I know only a few of our New York members well, and have visited none at all, so I am actively seeking suggestions for good Regional Meeting sites. (Thanks to the members who chimed in at the Raleigh meeting, and the folks I’ve had a chance to talk with already.) Although it was before my time, our last New York meeting was at Cornell, so perhaps something closer to Saratoga? Please let me know at polly@robinhollowfarm.com if you can host, or know a good place to go, or, most importantly, if you can be part of a Regional Meeting committee! If we can pull off a New York meeting for this year, great, or we can meet in Rhode Island in ’08 and New York in ’09. It’s your ASCFG, so let me know.



MID-ATLANTIC
Andrea Gagnon
LynnVale Studios

As your new Regional Director I’m here to persuade you that there will be plenty of time to rest when you’re dead. The season may be over, but there’s still growing to do. You’ve got to feed your floral needs with more than cocoa and catalogs by the proverbial cozy fire. I know a place where you can dig flowers without getting dirty. But before I divulge that secret, let me tell you about my business.

This year, my sixth in production, my husband Lou and I will be expanding from growing two and a half acres to five acres of flowers on our family farm in Gainesville, Virginia. We sell to high-end florists in the D.C. area, at three farmers’ markets, provide flowers and designs for special events and weddings, and conduct design workshops. Each year we get closer to our dream of transforming the farm into a successful and profitable agritourism site. People often tell me that when you find work that you love it doesn’t feel like work. Now I know what they mean, and I’m by no means ready to call it quits for the year.

My plans for next season are set for the most part; orders are in, and market applications submitted. Plugs grow on at neighboring greenhouses, cool-season crops are wintering over nicely, and our hoop house is full of anemones, ranunculus, sweet peas and poppies. Overall, a great start. I only hope that Mother Nature cuts us a break in 2008.

No rain (11+” below normal), high temperatures and an old pump combined to make last season our most challenging yet. Luckily, sales at our markets increased because of consistent

market attendance, higher prices, and a new wireless credit card machine, a necessary convenience for our customers who carry little cash. I was amazed at how often customers planning to spend \$3 to \$5 increased their purchases significantly when they learned we accepted credit cards. So sales are up, life is good, and I'm savoring my successes.

Without the avalanche of plant material due to arrive in a month or so, it's easy for me to feel confident. Surely we'll have more rain this year; surely there will be more customers; surely I'll have more applicants than jobs to fill; and surely I'll thwart any threat, be it thrips, aphids, mildew, rot, etc. This is about the time Lou turns to me and says, "Don't get cocky. Go find out what you don't know!" For years I felt deflated at this request, my carefully laid plans somewhat tenuous. But, I found a solution; one that I hope will help you too.

Grab your family, friends, fellow growers and/or mentors and head to the Philadelphia Flower Show (www.theflowershow.com) from March 2 through 9, 2008, for a little "market research" (aka FUN). The show, started in 1829 by the Pennsylvania Horticultural Society, is the largest indoor flower show in the world. Housed at the Pennsylvania Convention Center it encompasses 33 acres under one roof including 10 acres of exhibition space in the main hall. It's simply an amazing celebration of flowers and gardening, attracting 250,000+ visitors annually. Now that's a market!

Although I'm hardly a show expert, typically the main hall is grouped into several major areas. This year's theme "Jazz it Up!" New Orleans-style promises eye-popping displays by national and internationally renowned floral and landscape designers showcasing some of the hottest, trendiest, and most beautiful flowers and plants of the season. Huge, lavish displays rule this area, but at this show even the tiniest bloom is revered.

Have you ever wondered just what your customers do with your flowers behind closed doors? Competition is fierce among individuals and garden clubs for sought-after blue ribbons in areas of floral design and horticulture including miniature arrangements, window box displays, garden arbors, indoor plants and more. It's well worth the wait in line to see the diminutive dioramas and equally impressive array of jewelry. Competitors are judged on their ability to interpret the chosen theme while adhering to strict fabrication guidelines. For instance, the jewelry is entirely crafted of plant materials: seeds, nuts, pods, etc., and each entry includes examples of each material used in its natural state, along with the finished piece. Exotic coral necklaces made from the tops of spent daylily bloom stalks were my

favorite. So allow yourself enough time, at least a day, wear comfortable shoes, and choose your companions wisely. For the past two years I've attended with my good friend and talented floral designer Marion Butterworth. As a former ASCFG member and grower, Marion possesses all the qualities of the perfect show-going companion. A fellow flower addict, she's interested in all aspects of the show, from the tiniest plant to the tallest topiary. As Marion's design abilities contribute to the success of both our farmers' market sales and our special events throughout the year, it's important to feed and inspire our collective imagination and creativity. Marion also likes to shop, an important quality when navigating the impressive retail area.

The show boasts 140 vendors of everything from beautiful flowers and plants to a complete array of garden accessories, tools, gifts and more—monthly deer control service! \$350 muck boots! Hammocks! Well fortified after great Philly cheese steaks, we investigate every display, try out

all the new gadgets, and shrewdly eye new glove designs, asking ourselves if they really will last daily punishment season after season.

This is the place to get the latest and greatest in gardening. I picked up a versatile weed weapon, the CobraHead weeder, now available at Johnny's Selected Seeds of Winslow, Maine (www.johnnyseeds.com). If you're interested in value-added products, our favorite wreath designs were from Greensleeves from Millville,

Pennsylvania (www.greensleevesflowers.com). For garden accents we loved Sandstone Gardens from Joplin, Missouri (www.sandstonegardens.com). These companies distinguished themselves through superior products and/or designs along with effective and attractive displays.

Naturally, the most impressive retail displays of flowers, fresh and dried, willow bunches, wreaths, and bulbs were by ASCFG members. In 2008, Farmhouse Flowers and Plants will join veteran show vendors Cramers' Posie Patch and Oregon Coastal Flowers/ZCallas. As I write, Dave Dowling is busy erecting another greenhouse exclusively for show lilies. I look forward to all the new varieties these formidable growers will have and their knowledgeable culture recommendations.

Last year, chatting with Keith Cramer about show prices of tuberose bulbs (\$4+ each!) got me thinking about marketing them myself at spring plant sales and markets. Selling these bulbs for \$2 each or 6 for \$10 accounted for welcome early-season sales. I found that my pre-bagged bulbs sold the fastest. These sales required no planting, no irrigating, and no harvesting.



What didn't sell I planted for cuts later in the season. That one gleaning from the show proved well worth the price of admission.

So treat yourself to a trip to Philly, enjoy the show and/or lend a hand to one of our members. If you can't make it, check your local listings for shows closer to you. Get out and find out what you don't know, get inspired, and profit from it!



SOUTHEAST *Susan Wright*

Shady Grove Gardens & Nursery

Well here we are in the mid-winter looking at the Trials and New Varieties. Most of us are "plant people" or we wouldn't be in the flower business. It is great to have a career that allows creativity and enthusiasm, however, there are pitfalls as well. It is easy to get caught up in flower fever, ordering the newest seed varieties leading us to start hundreds and hundreds of seedlings. Yikes, we need a plan.

I started as a perennial plant grower, so my background is all about newer, bigger brighter. What's the hottest variety each year? Aren't all gardeners victims of this as well? Whether it is the marketing that gets us or sheer curiosity, we love to try new plants. And herein lies our downfall.

Farmers need to choose their crops wisely. I find successful flower farmers balance variety and selection with practical logistics of demand and manpower, topped off with personal favorites and the unusual. That is why the Trials are so valuable to us. We can learn from other members' experiments.

After reading the Trials Reports and the New Varieties section I'm ready to try it all. Fortunately, common sense sets in and I remember we have limitations of markets, land and time. With the perennial and woodies we grow we have to be even more selective. They are a long-term commitment for the space they are allocated.

Now is the time all that record-keeping comes in handy. You did keep records, didn't you? At least a few notes to self. You need to know what did well for you last year, and perhaps more importantly what didn't do well for you. Ditch those losers. You need to make room for new favorite sons.

When I'm looking at new plants and dreaming of great things, I find it helpful to think about what we are physically capable of, as well as thinking how our market will be. I make a list of what I want and then next to each item list where I plan to sell it. This really helps with the reality check. It also helps to allocate greenhouse and field space for each new and annual crop, leaving space of course for successional plantings.

We experiment with small quantities of a new item. But therein lies another problem, marketing small quantities of many different flowers. I love plants and I grow many varieties, but I'm finding over time it is hard to market so many different varieties and just as importantly, keep track and care for them.

So now we have moved into the phase which smart growers will start with: narrowing the number of different crops you grow to a manageable size. Thinking about your marketing plan all the time. Florists want one thing, farmers' market customers want another.

We pick and choose any additions to our crop mix with an eye on what we are missing. Do we have enough orange in October? Are the florists wild for green again this year? Would we be better off growing more of the same as last year? Do I know how to germinate echinops and how long does it take to produce?

I now make general lists of what sold well and not so well in each type of market. I also make notes after each farmers' market. The more complex and diversified your markets are the more you will need to track. I'm realizing I need spreadsheets for everything and of course backups.

Regardless of how complex your system is, the important thing is to track what is selling. The best way for us is counting stems cut and stems sold of each variety. You will be surprised by how much these numbers differ from your general notes. So try to do both.

I'm looking forward to a great 2008.



MIDWEST

Suzy Neessen
The Flower Farm

Since this is an election year, and I live in Iowa where there's a presidential candidate around every corner, I thought elections would be a good topic to talk about. I know I've written about this in my last column, but I wanted to add to my thoughts, since I'm a member of the Nominations Committee.

Every year always has a few positions that need to be filled, and that process starts at the fall Board meeting the year before. The Committee meets to come up with a list of names for each position. For 2008, we need a Secretary, a Treasurer, a South-Central Regional Director and a Midwest Regional Director. I will not be able to run again because I won't be living in the Midwest Region anymore. I've accepted the position of farm manager at Bob Wollam's. Plus, after four years it's time to let someone else take advantage of this wonderful opportunity.

Anyway, the Committee comes up with a list of names, and the Vice-president, who is the chairperson, will call those members and ask them to consider running. Now, there are over 500 of you members out there and we cannot possibly know all of you.

We'd like to have a *real* election every year so you'd have a choice of 3 or 4 candidates to pick from for each position, but the truth is that if we can get even 2 names we're doing well.

The spring Board Meeting is where we hopefully have our final list of candidates to put on the ballot. If not, more names

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SOUTH-CENTRAL

Vicki Stamback

Bear Creek Flower Farms

Well, it's that time of the season in which I begin to look back at the year and evaluate. What did we do well? Why and can we do it again next season? What didn't go so well and did we have any control over it? What are all the things we will do differently next year? What can I do and what can I grow to increase my sales? The list of questions goes on and on.

And of course, there are always things to be grateful for and the list for me is so long, there is not enough space here to mention them all. The most important thing is that I learn from everything, especially the things that go wrong, or are just mistakes or accidents. It all teaches me something, which in my opinion is the best part of growing flowers or anything, for that matter. We should never quit learning.

One thing that turned out exceptionally well this year is the cut flower poinsettias. It will be fun to see if I sell them all since I'm growing 200 more than last year and I sold out last year. The rooted cuttings arrived the first of July this year and we put two cuttings in an 8" pot. I put lights on them and gave them long days until the last week in September. The lights then came off and they had normal short days. I sold some of the first cuts this past week (November 26-30) and they are stunning.



are chose and the Vice-president makes more phone calls to try to come up with the final ballot for the summer election.

So...now's the time! Throw your hat in the ring! You don't even have to solicit money to fund your campaign. Don't think like I used to—that I wasn't a big enough grower to be a Board member, or that I didn't know enough to have anything to contribute. The majority of growers in the ASCFG farm on less than three acres, and have annual sales of less than \$45,000. This makes the voices of small growers just as important as the rest.

And unlike the presidential elections where you're not sure your voice is being heard, as a Board member your voice can really change things. To name a few: National Conference sites and programs; Grower Grant recipients; budget issues; Seed Trials; Cut Flowers of the Year nominations; the next ASCFG international trip—Ireland? Italy? Thailand?; ideas for membership benefits and growth; research topics.

Get involved! Especially those of you who the Committee may not know well enough to put on the list. Put your own name in the running.

ASCFG Board members are positive, creative, innovative, logical, level-headed, broad-minded, thought-provoking people, and best of all, just plain fun to be around. Twice a year you'll get to travel to a new and exciting city you've probably never been to, for Board meetings that are anything but boring. You'll be wined and dined and get to hang out with really great people who know how to talk flowers and really care about keeping the ASCFG alive and growing.

Being on the Board is a good way to get to know more members and that means learning even more about growing flowers. Isn't that why we're all members anyway?

I already have standing orders (which are good) and sales should increase as it gets into December. The photo shows two of the pots sitting on the greenhouse floor and next to a 32" tall table. This is the first time I've been able to get them that tall, so you can bet I'll be doing the same thing next year.

This time of year is also good for projects we just never have time for during the really busy part of the season. Growing year-round makes working on projects increasingly difficult, but we manage to get a few done every year. This year one big project was to get permanent beds built in the one greenhouse I have that doesn't have permanent beds in it yet. It's a good project. It makes better use of the greenhouse space, teaches everyone how to use power tools and also how to do a simple construction project like that.

It also shows all my employees that I am still the queen of pounding in 2-foot stakes with a sledgehammer. They better not mess with me! Ha ha! By the time you read this, that greenhouse will be full of growing seedlings.

We have several other projects we will try to get done during January, one of which will be pretty involved. We need more storage space so we are going to build a loft with stairs. We can store light things on the loft, like boxes of inserts, boxes of pots, some tools, etc. Then we can store our equipment under the loft and still have lots of open floor space to work with.

I just finished reading a monthly business magazine I get and ran across a very good bit of wisdom that everyone should remember, especially when there are rough days.

Listen to your instincts. When you come to a crossroads in your business and the path is unclear, trust yourself. Do all the research you can, but pay attention to that nagging voice in your head.

Stick to your vision. When business is booming and growth is good, it's easy to get distracted and lose focus. You have to decide what success means to you, and it's not always about money.

Be adaptable. Don't let setbacks demoralize you; use them as opportunities to grow and improve.

Stay humble. No matter how successful you become, never forget where you came from and who helped you get there.

That last one I can thank ASCFG and all the wonderful people I've come to know being a part of this organization. What a really big thing to be grateful for. Have a prosperous 2008 growing season, everyone.

"Do just once what others say you can't do, and you will never pay attention to their limitations again".

James R. Cook



WEST

Brenda Smith

Smith & Smith Farms

I do have NEWS from the West Region! We are currently planning a meeting on the West Coast that I believe will be of interest to all the ASCFG membership. Goldsmith Seeds, Takii Inc., and Sakata Seeds have all agreed to host the ASCFG for a special session during their big spring fling known as the Pack Trials. The Pack Trials are when the seed companies on the West Coast showcase their new varieties. What will make our meeting unique is the representatives of these companies, Jeannine Bogard, Goldsmith; Bonnie Marquardt, Takii; and Kathy Cron, Sakata (yes, you do recognize these names if you went to the San Jose Conference) are going to have a special presentation for cut flower growers with information specifically on new cut flower varieties. We will be meeting on Friday, April 4, 2007 and taking a tour of each of these seed companies located south of San Jose in and around the Salinas Valley.

This will be a meeting **not** to be missed. Make your plans now, as we continue to plan the details of this special day.

I hope this is a successful gathering in April. My thought is that if we get a good response we can make it an annual affair. The wealth of information the seed companies have is of interest to all cut flower growers, no matter the size of your farm. Being on the leading edge of new varieties and cultural information is exactly what a 'specialty' cut flower grower is all about.

Before I start on the main ordering for next season and looking at all those new varieties, here at our farm we decided to embark on an intensive and introspective farm planning session. This has come about due to some changes in our personal lives at the farm but is something I believe is helpful and should be a part of the off-season each year for most farms, certainly our farm. I admit that we have let this aspect of our farm kind of slide in the past few years, so we are now looking at our 12th year in farming and want to fine tune the farm and examine where we are going with it. It is easy to go along and get bogged down in just the everyday chores on a list that never ends but long-term planning is very important.

What we did was leave the farm to go do our planning. We invited about 6 extended family members who keep up with our farm and we traveled to Oregon for our session. We had a great day, poring over the farm and coming up with new ideas. At the outset of the day, my brother-in-law said "What is the goal for your farm?"

My goal for the farm after 12 years was to be more profitable so I can actually generate a living wage from the farm and I also wanted to have more free time. These 2 goals would seem to not be mutually agreeable. In fact, after the day was over, we actually had some ideas that could generate more income while not requiring extra time on my part.

I am currently writing a small grant application for our farm for some monies that are available through the USDA. These are specialty crop grants and the monies are distributed by the state. Check with your state agriculture department as all states have these funds available to them. Keep in mind that each state may have a different method of distributing the funds. A couple of seasons ago, I was awarded some of this money for the expansion of my perennial flower beds. Our perennials have easily added an extra 3 weeks of bouquets onto our early season. They make up the bulk of the early bouquets.

This grant I am writing now is to have an outside person with expertise in marketing to look at our farm and give us further ideas and information to take our farm to what I would call the 'next level'. With the season barely over we have a good framework and vision for where we want to take our farm in the next season and beyond. Remember, this long-term planning is an important part of farming. I speak from experience here. Plan well and grow good. Wishing you the best in your growing and farming in 2008.



NORTHWEST

Jeriann Sabin

Bindweed Farm

Every artist knows and masters the principles of design—unity, conflict, dominance, repetition, rhythm, balance, harmony and transition—until they become so ingrained she uses them unconsciously. Working on the cover art for this *Quarterly* I was often conscious of balance. Part of it was the nature of the artwork itself and part came from reflecting on a recent Board meeting and my first National Conference. My hands were painting but my mind was drawing parallels between artistic balance and the balance we strive for in farming.

At our Board meeting I volunteered to illustrate the *Quarterly* cover to celebrate the ASCFG's twentieth anniversary. This was met enthusiastically by the Board, who suggested we offer the illustration as a painting to be auctioned at the National Conference in Portland. Wow, great idea, but now I needed to find a balance between an illustration and fine art. My original idea was to illustrate the letters, ASCFG, and then fill the space with flowers whose botanical names started with each corresponding letter. The focal point of the illustration would be the letters, celebrating the association, but who would want a painting about letters? On the other hand, a floral painting's focus is flowers and anything as graphic as letters should not be included—so I needed to find a balance between the two art forms.



Once I had a general concept and started working on the flowers, I needed to balance between a "painterly" and an "illustrative" quality. Considering my audience, the flowers needed to be familiar and recognizable, and to honor the labor involved in growing perfect flowers, they needed to be accurately rendered and yet aesthetically pleasing.

To balance the overall design required a variety of flowers—tall spikes to fill the vertical spaces and round full flowers to anchor the space (just like a three-dimensional floral arrangement). Adjustments to scale were also needed—I tweaked the size of flowers, enlarging and shrinking to create a pleasing design, again balancing between art and reality.

Color was an issue as well. The colors needed to be bold and beautiful—eye-catching enough for "cover art" and still remain within a believable realm. There also needed to be a harmonious color influence to create balance between the background, letters and flowers.

I agonized for days playing with the various elements in my mind. Leafing through old *Quarterlys*, plant catalogues and gardening books I focused on distractions until the looming deadline was hanging heavily overhead. Then I locked myself in the studio and just did it.

Growing flowers for the aesthetic market also requires a small circus of balancing acts. Growers walk the line between new varieties and those with proven track records. We seek balance when creating seasonal color palettes—we plant a mix of annuals and perennials but some weeks we are really heavy on one color. Have you ever tried selling an entire truckload of yellow flowers?

Weighing trends can keep you on your toes as well. Fifteen years ago a wholesale buyer told us sunflowers were "out"—glad I didn't listen to that one, sunflowers are one of our biggest sellers. The same buyer could not sell red and twelve years later it is one of our hottest colors but how long will it remain trendy? There is also the cutting see-saw—do you cut for longevity or risk cutting more open flowers for greater instant visual appeal?

We are local and this small business does sustain our household but we juggle the production of aesthetically perfect blooms with the desire for chemical-free farming. Our "audience" demands perfection. These consumers may feel noble eating less than perfect produce, they may even be fond of organic "blemishes" but they refuse to serve wholesome foods with "hole-y" or buggy flowers. Keeping ahead of weeds and pests with a limited staff—my husband and me—is a constant struggle. We pick off, wash off and add beneficial bugs but when aphids and thrips threaten an entire crop we must resort to the big guns.

But the ultimate challenge is balancing life with our livelihood. There is a huge difference between gardening and raising

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flowers. Farming, especially raising flowers for the cut flower market, is not a hobby.

Years ago I read an article about two ladies growing flowers in California, illustrated with lush glossy photos—should have been my first clue. Ralph warned me that farming was not like a Martha Stewart story spread. We have been farming for fifteen years and I have never stood at sunset in a dazzling white dress and floppy brimmed hat with a pretty basket of posies in a field surrounded by rows of full-blown flowers. On any day June through August if you drop by before noon you will catch me unshowered and sweaty up to my arm pits in weeds, bugs, flowers and stinky buckets not having had time to brush my teeth let alone my hair. Flowers are a lot of hard work and if you don't find a balance between work and rest they will eat you alive.

Because we are so isolated, frantic clients call through out the night and day during high season and we keep the cooler stocked for any emergency. This makes for long days and short tempers that we have learned to be aware of and work around. We balance these hectic days with moments of quiet and calm and try to be mindful that we are creating a life as well as making a livelihood.

Once I settled into the cover art and got the pencil in my hand things just started coming. The images poured onto the page just like they were supposed to. The flowers fell in place and the overall design started taking shape. Colors flowed from the brushes and it all held together. Every element fell into place and I am pleased with the finished piece. We often experience something quite similar when farming. Rather than becoming overwhelmed trying to balance all the elements I just get out there and start working. Getting down and dirty and letting the soil “ground” me I usually find the balance.



Sweet F1 Series Sweet



New **Sweet** gives professional cutflower growers a *Dianthus barbatus* series offered in separate colours with no vernalization required.

Sweet produces large, very fragrant, long-lasting blooms on straight, strong stems, shiny leaves.

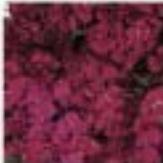
It makes an excellent bouquet filler item for florists.

As a professional greenhouse and field cutflower, **sweet** produces high yields of salable stems in solid. The first year flowering plants are very uniform for height and flowering time.

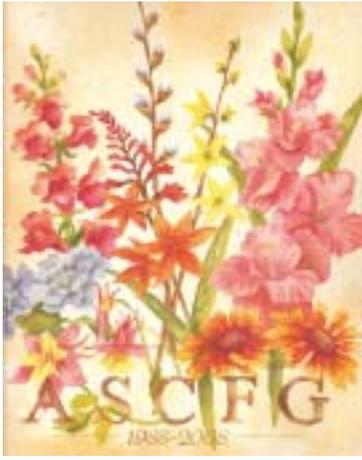
Field grown plants are very uniform for height and flowering time. 18 to 36 inches (45-90 cm), with **taller growth** achievable from early Autumn-transplanted, greenhouse-grown plants.

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Celebrating 20 years

2008 marks the 20th year of the ASCFG's existence. Throughout the year, we'll use these pages to remember the progress of the ASCFG from 1988 to 2008. If you have a recollection of a memorable ASCFG moment to share, please send it to us and we'll use it in this section.

I'm often asked about the genesis of the ASCFG and "how long" I've been with the organization. Ten years ago, I wrote the following in *The Cut Flower Quarterly* to explain just that. When I told him I was reprinting it in this issue, Allan Armitage decided he wanted to chime in. His comments are in green italics.

The ASCFG: Ten Years After

"At a bar called O'Malley's" is a line in Dave Barry's "Book of Bad Songs"*, but it's also where the Association of Specialty Cut Flower Growers was conceived. Probably not the same bar, but it makes a good opening line.

In the spring of 1987, so many people were visiting the New Crop Research Program at the University of Georgia in Athens to learn about field production of cut flowers that more time was spent ferrying them around than actually working on the plots. We had guests from all over the country—all over the world, sometimes—who came to see the treatments Allan Armitage was inflicting on annual and perennial flowers. There were experiments involving varying levels of shade to affect stem length, spacing studies to determine the number of plants per square foot for optimum production, and various postharvest observations. There was also a tremendous amount of cutting, weeding, watering and student worker wrangling necessary to keep the research beds looking respectable enough to impress the visitors.



Allan Armitage measures 'Coronation Gold' stems.

The idea to develop a cut flower program started a few years before when I was traveling in Holland. I visited a number of very small flower plots, often using the same acreage as bulbs, and asked myself "Why can't we do that?" I was a young whippersnapper who had not yet learned the meaning of "It can't be done", so I started building cut flower beds when I returned in the fall of 1984. It did not take long to realize that 1. Nobody was doing any research on cut flowers other than greenhouse roses, mums and carnations, and 2. Our piddly half acre required a great deal of time to plant, maintain and most of all, to gather data. I next realized 1. There was no funding available from any funding agency (perhaps this is why nobody was doing this research), 2. Outdoor data were notoriously affected by weather (not good for statistical analyses) and 3. I needed help. There was not a great deal I could do about the first two, but concerning the third, I made the only sane decision of my cut flower career; I hired the talented and lovely Judy Laushman.

So one Friday afternoon at O'Malley's Bar, where members of the UGA Horticulture Department tended to gather for beers at the end of the week, Allan and I were discussing methods of handling such large numbers of people efficiently, so that we might be able to entertain them and continue the work they came to see.

"I have an idea!" Allan announced. I hadn't yet learned to feign deafness upon hearing that particular line from my manic boss, so I listened politely. "Let's have a conference! We'll invite all the cut flower growers we know, seed company reps, extension people, suppliers—all the people who come separately during the year can come at the same time!" It was kind of like Mickey Rooney and Judy Garland shouting "Hey kids, let's put on a show!" Never having even attended a national meeting, let alone coordinated one, I agreed cautiously. Not that I had a choice.

Even though people were writing and phoning, I thought things were progressing swimmingly. Because they were in the heat all day, and were measuring flower stems and flower numbers, my workers, especially Ms. Laushman, demanded I take them to the bar on Friday afternoons. We needed to drink a lot in those days, and probably no decisions other than what beer to choose should be made at a bar. Nevertheless, I thought a conference might be a good idea, and fortunately I had plied Judy with enough cabernet that she agreed to look into it. I also mentioned that I would not buy her any more wine if she did not agree. That seemed to seal the deal.

A conference called "Field Grown Cut Flowers" was scheduled for May 28-29, 1987. We planned a day and a half of speaker sessions, and a half day of touring the cut flower trials. I learned quite a bit about promotions, scheduling speakers, breaks, meals, tours and registration. (I thought it was a real big deal back then.) Despite our long planning sessions and meticulous attention to detail, we somehow overlooked the fact that I was pregnant with my first child, due three weeks before the meeting.

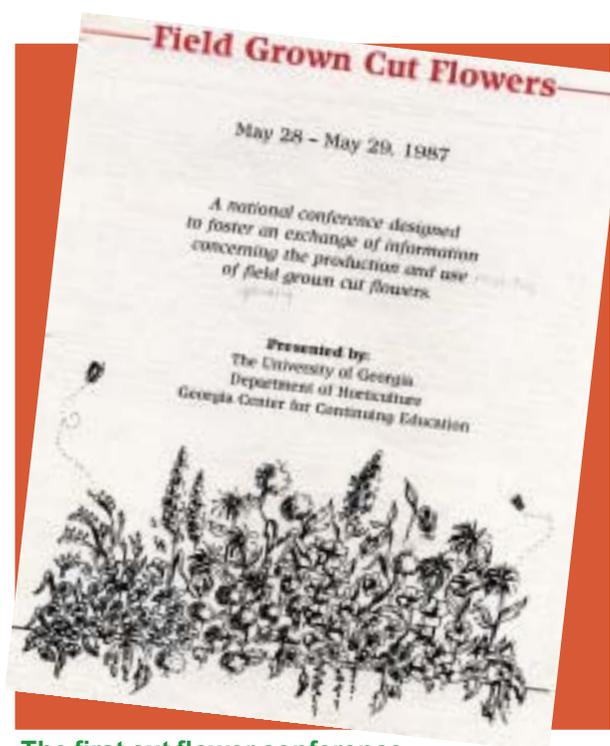
Judy was doing an excellent job getting the word out and she had actually talked a few growers and allied tradespeople into thinking about coming to Athens. That she was complaining of an upset stomach, especially in the morning, went totally over my head. "A baby!" I exclaimed, "How did that happen?" Oh well, on with the show.



Visitors to the UGA Cut Flower Trials.

We expected about 50 people from the Southeast to show up. We would have been thrilled to have 75. The final count showed 163 attendees. We were more than thrilled, we were shocked. Who were these people? Were they all growing cut flowers? How did they hear about this meeting? Looking now at the attendance list, I see names from California, New York, Ontario, Maryland, Texas, Washington—Jeff McCall even made it from Hawaii. Obviously there was a tremendous need for information, and for connections to other growers.

When the numbers kept coming in, I was shocked. Today 163 people does not seem like a lot, but then, we were ecstatic and not a little scared. Judy, of course, was sick.



The first cut flower conference.

I mentioned that it was time for her to give birth so she could be available to lead the tours I had planned.

I remember the afternoon of the tours being beastly hot and humid (just given birth, I was particularly susceptible, but Allan let me have some water, once); we had planned to spend only a couple hours at the trials, but we could not get people to leave after four, they were so enthralled at what they were seeing, and with whom they were talking.

I think it was a special time because it let people meet other people who were toiling away in anonymity just like they were. Our data, as paltry as they were, were eye-opening not because we had discovered major breakthroughs, but because actual numbers were being generated. We couldn't get them out of there. Judy, of course, now that she had given birth, was still as demanding as ever. I eventually put a water hose out so she and the others could get a little water.

Enormously pleased with ourselves, we went back to the business of research, until we got a letter from seedsman Joe Seals, who had been a speaker at the meeting. He suggested that the level of interest expressed at this meeting pointed to a need for a new growers' association, one with "more emphasis on grass-roots information sharing and research and less on back-patting, awards and legislation lobbying." This association would be based at UGA and coordinated by...well—me.

I heard an idea of starting an association or something gaining a little steam and I said "The only way that will happen is if the industry wants it badly enough to get something organized." Since there was no industry, I felt pretty safe. At that point, individuals like Joe Seals, Bob Pollioni



Who were these people?

and others said they would be interested in discussing the idea seriously. Since they had called my bluff, there seemed only one smart thing to do. I took Judy back to O'Malley's and offered her sufficient wine that she agreed to coordinate this endeavor. Little did we know.

Then Allan took off for a sabbatical in New Zealand, allegedly to study calla production, and left me to continue our research, and create and circulate a pathetic little sheaf of papers optimistically called "The Georgia Report". By the time he returned, I was leaving for the San Juan Islands, and the concept of an association seemed to be lost in the transition.

Let's see, stay in Georgia or go to New Zealand? When my opportunity came for a sabbatical in New Zealand, I was confident that Judy could handle the program on her own. We started "The Georgia Report" which was the precursor of today's glamorous Quarterly. It did not win any awards for style and panache, but it was the first of its kind to address specialty cut flowers. However, I guess Judy got a little upset with my leaving her alone, and she decided to head to the San Juans. Hmm, Athens or Friday Harbor—what was the matter with that girl?

But, like computer viruses that defy every program you install, the idea

didn't die. August of 1988 found more than 30 people from all levels of the floral industry gathering in Chicago for the first organizational meeting of the "National Field Cut Flower Growers Association." We had growers, publishers, suppliers, academics, other organizations' representatives, you name it, they were there. Besides such riveting topics as bylaws creation and committee appointments, one of the liveliest discussions focused on the actual name of the organization, which had to be carefully considered, since not one specific crop was to be the focus. Every permutation of the description we now call "specialty" was bandied about: field-grown flowers, summer flowers, minor flowers, secondary flowers, the-USDA-doesn't-know-what-to-call-them-either flowers. I think it was Jim Gamer who finally came up with the winning title.

That was some meeting! And although there far too many ideas, and far too little time, the seed took root. This time I had to buy not only Judy a glass or two of wine, but half the country. I would have come up with the name if someone had wakened me during the bylaws discussion.

Only a handful of those present at that Chicago meeting are still members, but their actions and decisions formed the basis of the organization. Much was accomplished at that meeting,

and at the next conference in March, 1989 in Athens. The first newsletter, called *Gatherings* by Peter Loewer, who designed the original “feather duster” logo, was published in Winter 1989. It became *Cut Flower Quarterly* in January, 1989. The *The* was added to the next issue.

The logo really did look like a feather duster, and we laughed about the design when we first decided to use it. That it was the only design submitted in our exhaustive national search may have had something to do with its choice.

Membership grew, and by September 1990, the ASCFG was stable enough to hold its own conference independent of a university. That was in Ventura, California; followed by the City of Light, Cleveland in 1991; Burlington, Vermont in 1992; Overland Park, Kansas in 1993; back to California for San Jose in 1994; Baltimore in 1995; Denver in 1996; and seeming just weeks ago, Portland in 1997.

We had another conference in Athens in 1989 and it was obvious that this thing was not going away. As a grassroots organization, it was important that the University and I relinquish control. Having our first “official” ASCFG conference in California was Bob Pollioni and Judy’s brilliant idea (I wanted it in Hoboken). After that, I sat back and watched this small gem of an idea turn into a diamond pendant. I have attended many ASCFG conferences and I leave each one with awe and satisfaction. Awe in that an organization like this evolved from a few beds of flowers, and satisfaction in listening to how much members benefit from their interaction with each other. I listen, I marvel and I walk away with pride.

Today the ASCFG has about 600 members, publishes a 40-page

The Cut Flower Quarterly

newsletter and a Membership Directory demanded by buyers across the country, puts on a pretty good national conference every year as well as regional meetings, offers the only publications on specialty cut flower production, sponsors an email list serve, and even will offer its first research grant this year.



The first newsletter.

In his letter from the President, Rick mentions that Roses, Inc. is interested in working with the ASCFG. When Will Fulton met with their Board to discuss some options, they told him they were impressed by a particular aspect of our organization. Not this fine newsletter, not the meetings, not the Directory. They admired the level of generosity and participation of ASCFG members. Their functions, probably like most other growers’ associations, are run by their staffs. Ours are run by our members. All the aforementioned activities are coordinated in large part by Board members and regional members who volunteer their time, effort, and often personal expenses to provide services to their fellow growers. At the National Conference, the chair is a

member. The committees are all members. The people carting around floral designs and repairing slide projectors are members. Regional meetings are always planned and run by members. Most of this newsletter is written by members. You can’t get much more grassroots than that.

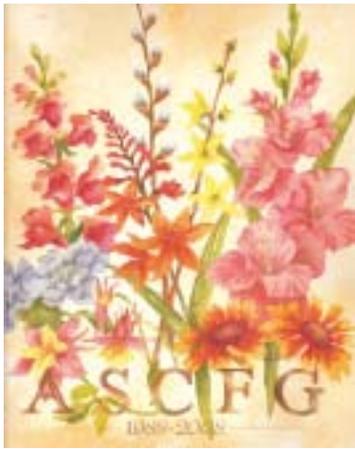
So what’s the point of all this reminiscing and self-serving narration? Shouldn’t I be haranguing you about renewing your membership and filling out your Membership Profile in a written language somewhat akin to English? And don’t any of you own red pens?

My point—and I do have one—is to declare that through all of this growing and evolving and volunteering, we have not lost sight of our original purpose, stated earlier in this article. Okay, I have seen a couple members pat each others’ backs, but I think that had something to do with the cold veggie burritos on the Portland tour. We leave the lobbying to the SAF. We do have an award or two, but we have not yet had our award ceremony photos published in

Floral & Nursery Times. We do publish results of recent research—we even have our own seed trials, conducted by members—and a viable research fund.

But before we get too smug and self-congratulatory, look around the industry. We didn’t come to Roses, Inc.’s attention simply because our members are swell. Changes in the rose industry have caused them to re-evaluate their operation. BPI (Bedding Plants International) dissolved its membership, dismissed its staff, and sold its building. Its members will now be associated with the OFA. Can the Association of Specialty Cut Flower Growers maintain its independence and integrity for the next ten years?

I don’t know if O’Malley’s is still in Athens. I don’t know where Joe Seals



is, or where most of the people from that 1988 meeting are, but Ten Years After (a band *not* in Dave Barry's book), the ASCFG is still here. Allan Armitage has been anointed Godfather of the specialty cut flower industry. Board members have come and gone, growers have jumped in and out of

business, conferences have been held and forgotten. What happens in the future is up to each of you.

Unfortunately, O'Malley's Bar gave way to condos and I have no idea what became of Mr. Seals. However, here we are in 2008 and it seems we are still going strong. Portland will be a blast; if you tell Judy you will be there, I too will return. We can share a few stories as we all buy Judy a wee glass of wine and pretend we are "In a bar called O'Malley's".

* The Pina Colada Song



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Cut flower crew at a bar called O'Malley's.

Yep, here we are in 2008. Who would have thought we'd still be going strong after another ten years? Surely not the naysayers who sneeringly labeled our members "backyard growers" and "Mom and Pop operations", and the ASCFG "that one girl in Ohio". Boy, that was a long time ago. John Dole has become the Capo of specialty cut flower research, my Board of Directors gets better every year (I'm looking forward to working with an 80% female Board), growers are still starting up and closing down flower farms, industry trends change with the wind, and this year's conference in Portland promises to be the most fun yet. *The Cut Flower Quarterly*, now a full-color magazine, is recognized as the best periodical for cut flower growers, its quality unsurpassed, thanks to years of dedicated contributors and Linda Twining's artistic talents. Sadly, *Floral & Nursery Times* folded two years ago.

In the ten years since my original article about O'Malley's, the ASCFG has grown up, and it *has* maintained its independence and integrity. It provides research grants to growers for on-farm research and to academics for university trials. The office gets calls from prospective members every day. The Bulletin Board unites growers of all sizes from across the country with a common thread: sharing their flower growing experiences. Copies of the Buyers' Guide are demanded by wholesale buyers, retail florists and wedding planners. Our numbers may not be the largest in the industry, but our members are dedicated to their association.

It's immensely gratifying to witness the extraordinary camaraderie engendered by association membership. Conferences are like great big family reunions: people who see each other only once a year, or know each other only through online communications, meet in person to share experiences, good and bad.

I am grateful to Allan for the opportunity to have created this organization with him back in Athens in 1988, and to my members for agreeing to keep me on for 20 years.

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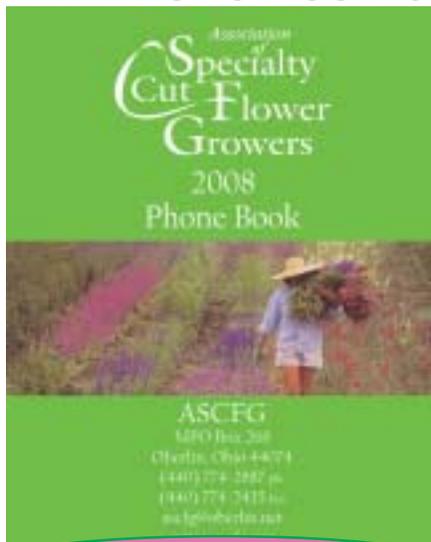
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The ASCFG Welcomes its Newest Members

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Steve Brown, AIFD, City College of San Francisco, CA
Jenny Carleo, Rutgers Cooperative Ext., Cape May Courthouse, NJ
Ben Davis, Leggett Farms, Washington, NC
Eric Ferjulian, Dixon Gallery & Gardens, Memphis, TN
Kitty Glass, Whispering Cedars Farm, Lawrence, KS
Arsalan Hayatdavoodi, Lancaster, CA
Karen Head, Graceway Gardens, South Amana, IA
Linda Henning, Henning Farms, Crossville, IL
Judith Hudson, Alsea River Gardens, Waldport, OR
Margaret Muth Kirkby, Muth Farm Flowers, Williamston, NJ
Bob Klebba, Fair Field Flowers, Madison, WI
Christianne Laing, Fair Field Flowers, Waterloo, WI
Roland Leatherwood, NCSU, Raleigh, NC
Carmen Lowery, Lowery's Landscape Design, New Braunfels, TX
Catherine Mix, The Cutting Garden, Sequim, WA
Suzanne Nolter, Blazing Star Farm, Block Island, RI
Albert Osman, Sherwood Products, Holland, MI
Acee Parsons, A.C. Parsons Landscaping, Bernard, ME
Avery Parsons, A.C. Parsons Landscaping, Bernard, ME
Sue Parsons, A.C. Parsons Landscaping, Bernard, ME
Leon Springer, Dripworks, Willits, CA
Clara Stokes, Belona Botanical Farm, Powhatan, VA

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www.ascfg.org

Industry Events

Mid-Atlantic Fruit and Vegetable Convention

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Web www.pvga.org

Wisconsin School for Cut Flower Growers

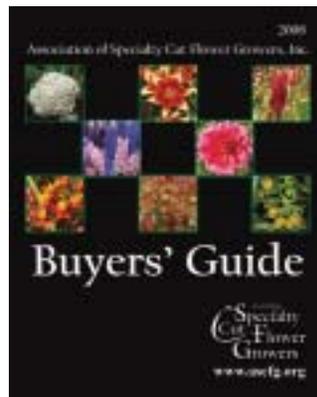
February 9 & 10, 2008
Univ. of Wisconsin, Madison
jhendric@wisc.edu

University of Maryland Cut Flower Short Course

February 26-29, 2008
Wheaton, Maryland
Email sklick@umd.edu

University of Connecticut Perennial Conference

March 13, 2008
Storrs
Email donna.ellis@uconn.edu



The 2008 ASCFG Buyers' Guide

Watch your mail for a packet of information including your own Member Profile (please update and return), the display ad rate sheet, and instructions for inclusion in the Buyers' Guide. *Please remember that you must return the form to be included in the Buyers' Guide.* The Buyers' Guide is a tool for buyers of specialty cut flowers, and for growers who want to sell to them. It is distributed to thousands of buyers across the country. The more growers who participate in the Buyers' Guide, the better it will be. Each year, we receive an increasing number of requests for copies of the book from florists, wholesalers and designers who have used earlier issues. Regardless of your current market, a Buyers' Guide listing is a great way to get your company's name in front of buyers you never dreamed of.

Grower Grant Recipients for 2007

The ASCFG Research Committee is happy to announce the winners of its Grower Grant program. These ASCFG members have received grants which will allow them to perform on-farm research benefitting specialty cut flower growers in the field or in the greenhouse.

Any grower is eligible to apply for these competitive grants. Topics to be considered include field pest control, new species and cultivar evaluation, fresh or dried postharvest, fertilizers and nutrition, economics of production, water management, and off-season production.

Proposed work to be funded by ASCFG should be for one year or less in duration, but can be part of a multi-year project. Recipients of a grant for a multi-year project will be given preference when they apply for funding in subsequent years. Proposals should be two pages or less in length.

Find more information about the Research Committee grants at the ASCFG web page, under the Research Activities tab.

Susan Wright, Shady Grove Gardens, Vilas, North Carolina, will find out if early and mid-season pinches of *Phlox* and *Helenium* will significantly lengthen the cutting season, while maintaining a reasonably saleable stem length.

Tom Parker, Parkerhouse Nursery, Mays Landing, New Jersey. His objective is to test the productivity of Kordes roses as both a cut flower and container plant in a climate representative of many areas on the East Coast, as well as to document customer preference and postharvest life.

Becky Devlin, Back Bay Flower Co., Virginia Beach, Virginia will test sweet peas, Karma dahlias, delphinium, foxglove and other perennials to measure the use of gibberellic acid for extending stem length, increasing stem count and cold substitution.

Jodi Verbanic, Cherry Valley Organics, Burgettstown, Pennsylvania. Jodi will determine the efficacy of corn gluten as a pre-emergent herbicide and Matran EC as mid-season foliar herbicide in a perennial cut flower system. She'll also prepare a cost-benefit analysis by comparing the costs of the herbicides and manpower with revenue generated from the output of those areas.



Susan Wright
Shady Grove Gardens



Tom Parker
Parkerhouse Nursery



Becky Devlin
Back Bay Flower Co.



Jodi Verbanic
Cherry Valley Organics

Research Grant Recipients for 2007



John M. Dole
N. C. State University



Stanton Gill
University of Maryland

The ASCFG Research Foundation awarded two academic grants for cut flower research.

John Dole, North Carolina State University, will continue his examination of postharvest life of specialty cut flowers. Stanton Gill, University of Maryland, will use trap plants to control insect plants in cut flowers. The competition is open to academic, governmental, and industry researchers.

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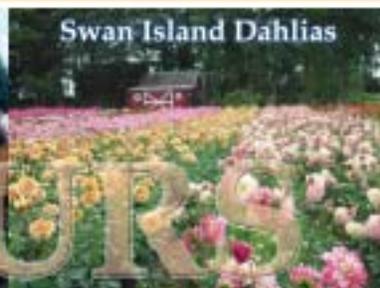
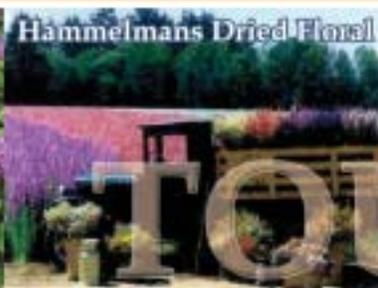


Monday
September 8
Growers' School

Tuesday
September 9
Tours, Sessions

Wednesday
September 10
Sessions, Trade Show

Thursday
September 11
Tours, Cruise



Eryngium planum 'Blue Glitter'



**F
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E
S
H**



Sorghum bicolor



**D
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D**

FROM *the Director*

Judy M. Laushman

What a pleasure it's been to put together this issue of the magazine. We welcome three new contributors to the *Quarterly*, Steve Bogash from Penn State, Chris Wien of Cornell, and Bonnie Marquardt, American Takii. These horticulturists are familiar to ASCFG members, considering their long affiliations with the organization. Steve is a multi-faceted researcher, with his thumb in everything from pond management, small fruit and vegetable production to cut flowers, his favorite. He's been a speaker at ASCFG Conferences and Regional Meetings, and was an able moderator of two Growers' Schools. His columns will focus on weed control.

Chris Wien has been at Cornell since 1979, also working with fruits and vegetables, but saving his best work for cut flowers. He's received grants from the ASCFG Research Foundation, allowing him to provide us results on his sunflower work. His contributions are always appreciated by ASCFG members.

Bonnie Marquardt is American Takii's flower seed sales manager. She has been the industry liaison to the ASCFG Board for two years, and a co-chair of last year's National Conference in San Jose. She will present her views on the floral industry and how ASCFG members can be involved beyond their own organization.

We're also pleased to see new faces on the advertising pages. Please contact North Creek Nurseries, DripWorks, JetRam, and Eat Local Food for your plant, irrigation, sleeves and promotional materials needs, and let them know you saw their ad in the *Quarterly*.

What can I say about the front cover? Jeriann Sabin's generous contribution is by far the most beautiful image to grace our magazine. We are planning how to use this print in further celebration of our anniversary. Read her Regional Report to find out how she created it, and please take a minute to thank her for work.

The evolution of *The Cut Flower Quarterly*, as illustrated on the back cover, has been twenty years in the making. From the six stapled pages of "The Georgia Report", to this full color, 76-page issue of the *Quarterly*, its development followed the growth of the organization. I think it's the part of the ASCFG that I'm most proud of. So proud that I ended the previous sentence with a preposition, just to celebrate. Even Grammar Queens take a break now and then.



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