

Volume 23, Number 1 Winter 2011

The *Cut Flower*

QUARTERLY

Association of Specialty Cut Flower Growers Inc.

for growers of field and specialty greenhouse cuts

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*Cover photo
Celosia spicata 'Celway Red'
courtesy of Kieft Pro Seeds*

The Cut Flower

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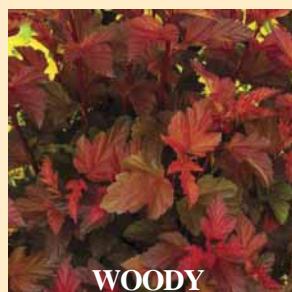
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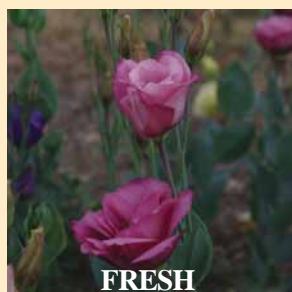
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2011 ASCFG Cut Flowers of the Year



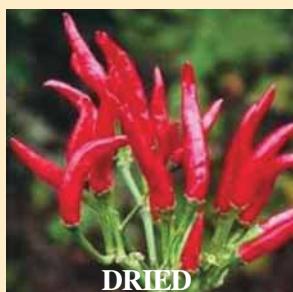
WOODY

*Physocarpus
'Coppertina'*



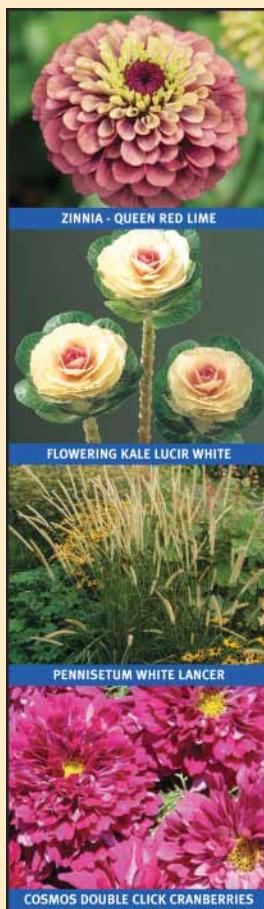
FRESH

*Lisianthus
'Mariachi Carmine'*



DRIED

*Capsicum
'Nippon Taka'*



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From the PRESIDENT

Vicki Stamback

I would like to personally thank all of you who attended the National Conference in Tulsa this past November.

It would not have been a fraction of the Conference it was without you there to participate. I hope every one of you had a great time, learned something new, and is happy you attended. I certainly appreciate all of you being there, and was just sorry I couldn't visit with everyone. And to all of the speakers, a heartfelt thanks for being there to give excellent presentations. Our national conferences would not be the caliber they are without

our speakers and their willingness to share information. Thank you so much for that.

We tried to do something different this year with the meeting, beginning with having it in November after almost everyone had had a freeze. The second thing we tried to do was shorten the length so you wouldn't have too many nights of hotel bills, and wouldn't be gone from your farm for too long. In doing that, we had to cut some things out because we just didn't have the time, like the flower design competition.

I would love to know how you, the members, feel about these changes as a whole. It's very important to us as the next conference is already being planned and for future conferences as well. Whether you start a Bulletin Board thread about conferences or email your Regional Director, let us know what you want to keep, what you don't, and your general feelings about the conferences. It's the only way we can make them better.

Thanks again for attending the conference in Tulsa. We are glad you were here and hope to see you this year in Reston, Virginia.

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New Ideas

King's Mums

'Allyson Peace' A very large, bright yellow reflex of excellent form, developed by John Peace of the U.K. A certain blue ribbon winner in its class. Best as a disbud. Medium height.



'Artist Orange' This cultivar joins ranks with 'Artist Pink' and 'Artist Yellow'. Orange petals with stripes of red make a colorful cut flower. Flower to sprays. Tall



'Apricot Courtier' The deep rich apricot color of this flower makes it a nice addition to our collection of reflexes. Good strong erect stems make a desirable growth habit. Best as a disbud. Medium height.

'Cloverlea Sunshine' A large marigold-yellow anemone with an almost orange disk. An early bloomer that will be popular as a disbud or grown to sprays. Medium height.



'Golden Pinwheel' This little spoon with pale yellow tubes and bright yellow spoons was featured as a cascade on the cover of our 2010 catalog. It is unusual because spoons don't usually lend themselves to be used as a cascade. Long-lasting. Flower to sprays or cascade.

'Maryll' This spoon makes a great cut flower or a colorful addition to any flower bed. The pink tubes, red spoons, and yellow center are striking. A strong, erect growth habit with numerous laterals and a long bloom season are very desirable. Grow as a spray. Tall



'Natalini' Named after one of our granddaughters, this is a lovely pink spider with long fine petals. Great as a disbud. If not disbudded there are numerous long laterals producing fine cut flowers. Disbud or sprays. Tall.



'Oregon City' We named this spider for our hometown, Oregon City. It is one of our earliest blooming spiders. Similar in form to 'Golden Splendor' but blooming two weeks earlier. A good addition to our spider collection because of the early bloom date. Best as disbud but could be grown for cut flowers. Tall.

'Rose Dew' We are offering this early-blooming old favorite again. A rosy pink intermediate incurve which blooms with a durable hard finish and produces good exhibition or garden flowers. A fairly low grower that looks good in containers. Flowers on 2nd crown bud. Medium short.



'Whirlaway' This spoon is very attractive with pink tubes and darker pink spoons. A spot of purple appears to be tucked inside the spoon. Tall strong stems make it a good cut flower. Long-lasting blooms.



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New
Varieties

North Creek Nurseries

Johnny's Selected Seeds

Sunflower 'Pro Cut Amber Glow' A new color in the Pro Cut Series, petals are golden yellow with a peach blush toward the center disk. The disk is a rich chocolate color, similar to that of 'Pro Cut Peach'. Flowers are consistently 3-4" on tall (60-72"), strong stems. Pollenless. 50-60 days, the earliest sunflower series.



Sunflower 'Pro Cut Gold' Petals are a rich gold around a golden center. The flowers are consistently 3-4" on tall (60-72"), strong stems. Pollenless. 50-60 days.



Celosia 'Ruby Parfait' A great cut flower celosia; the flowers are rich, dark rose, fuzzy spikes. Flowers measure 2-3" tall on branching plants. This celosia is a great filler and we used it in many bouquets and arrangements. The color and size made it very versatile and, like most celosias, it has an excellent vase life. We especially liked pairing it with other dark rose celosia varieties and sunflowers or zinnias.



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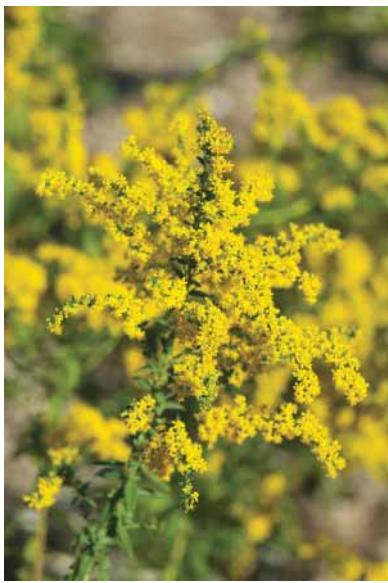
Winslow, Maine U.S.A.

Agastache 'Ava' A vigorous native hybrid with tall spikes of lightly fragrant, tubular rose-pink flowers. 'Ava' begins to bloom in mid- to late summer and keeps flowering for 2 to 3 months attracting hummingbirds to exceptionally nectar-rich flowers. Flowers bloom in whorls on sturdy, erect stems; foliage and flowers have a light herbal scent. After flowering is done in mid-fall, the deep raspberry-red calyxes hold their color until hard frost. Selected by David Salman of High Country Gardens and named after his wife, Ava.



Phlox paniculata 'Jeana' Found by and named after Jeana Prewitt of Nashville, this selection possesses outstanding mildew resistance with varying shades of sweetly scented, lavender-pink flowers, vibrant midsummer through early autumn. Foliage remains clean green while flower clusters create a tiered effect along upright, multi-stemmed branches. Expect a flurry of pollinator activity!





Solidago 'Solar Cascade' Delightful, golden-yellow flowers are borne in axillary clusters along reflexing stems from late summer into fall. Reliable, deep green, glossy foliage remains clean throughout the growing seasons. Not an aggressive runner, 'Solar Cascade' is a clump forming perennial reaching knee height, maxing out somewhere between the taller 'Fireworks' and more compact 'Golden Fleece'. Performs best in moist to average garden soil under full sun or partial shade; extremely drought tolerant once established.



age. Flowering late summer into autumn, Amethyst-blue flowers appear in whorls along sturdy stems and persist for approximately 8 weeks. A highly ornamental subshrub perfectly suited for the mixed border, container, as a specimen planting or incorporated into a seasonal cut flower arrangement.

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2. *Solidago 'Solar Cascade'*
3. *Echinacea 'Milkshake'*
4. *Agastache 'Ava'*
5. *Caryopteris Hint of Gold™*

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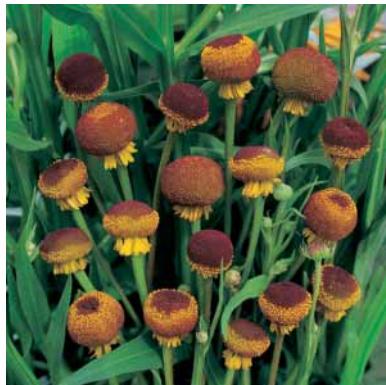
Dianthus caryophyllus 'Raspberry Ripple' Highly fragrant, double white flowers are picotee, laced with rich red to raspberry shades. Plants form a mid-sized mound of grassy, blue-green leaves. A stunning cut flower that lends a brilliant look for special occasion arrangements or stem sales. Plant height 24-30 inches.



Celosia spicata 'Celway Series' An excellent cut flower with plumosa flower shape on a tall, narrow plant habit. Great as a bouquet filler as it has small top leaves and long vase life. The high-yielding plants are programmable and well-suited to high-density production. A very good shipper. Colors include lemon, orange, purple, red, salmon, terra cotta and white. Plant height 28-40 inches.



Cosmos bipinnatus 'Double Click' This deep rosy-pink adds color and interest to the Double Click Series. Predominantly double flowers are produced on strong stems, making them excellent additions to arrangements. Although they are a little later flowering, they provide tons of color right up until frost. Sure to disappear quickly from your farmers' markets stand. Plant height 24-36 inches.



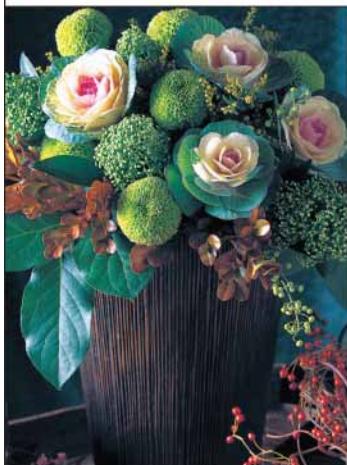
Helenium puberulum 'Autumn Lollipop' Unusual blooms with over-sized centers and tiny petals. Displays heads of rustic yellow & bronze with a small basal frill of ruffled petals. Unique and ornate specialty cut flower. Height 36 inches.



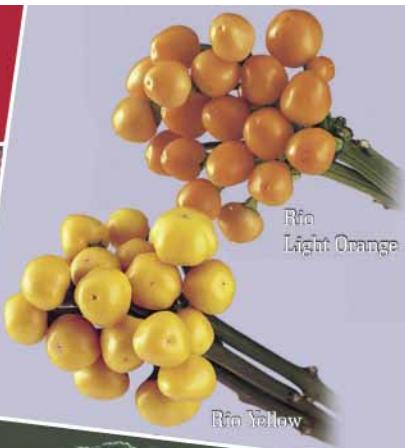
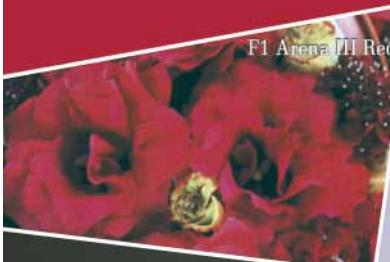
Digitalis purpurea 'Bondana Mix' An early, annual blooming variety that produces a quicker cut flower crop than other standard types. It includes an attractive mix of pastel colors perfect for floral arrangements. Plant will continue to flower throughout the summer if spikes are regularly harvested. Plant height 36-40 inches.



Setaria viridis 'Caramel' Graceful, nodding caramel bracts mature from green to warm-golden-brown. Younger flowers display a hint of burgundy. Plants are drought tolerant and produce all summer. They are ideal as cut flowers in both fresh and dried arrangements. Plant height 36 inches.



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New Varieties

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Snapdragon 'Chantilly White Improved' The Chantilly series is an open-faced, Group I-II snapdragon, with a longer vase life than other varieties. It is extra early and blooms 110 to 130 days after sowing. Stem length is 4 to 4.5 feet/120-140 cm. White Improved has brighter white flowers placed more densely on the stem than the previous White.



Lisianthus 'Arena II Apricot', 'Arena III Apricot' and 'Arena III Green'

Three new varieties are being added to the Arena series. The Arena series is less sensitive to short stem length under long-day conditions, is less sensitive to rosetting in plug cultivation and has very double flowers on strong stems. The colors that make up the series are classified by group, with group I being the earliest to flower, group IV the latest.



Lisianthus 'Vulcan I Green'

With the addition of 'I Green', the Vulcan series now has 6 colors. The Vulcan series is less sensitive to short stem length under long-day conditions, is less sensitive to rosetting in plug cultivation and has thick, cup-shaped flower petals which improves its transportability.



Callistephus 'Nina Pink' This spray-type aster series features an abundance of semi-double blooms on vigorous plants. Excellent for mixed bouquets. Pink is the newest addition to the series which has 3 other colors, rose, salmon pink and white.

Gomphrena 'Audray White' Joining 'Audray Bicolor Rose', 'Pink' and 'Purple Red' is 'White'. The series can be used for both fresh and dried arrangements. The Audray series can withstand hot and humid conditions. Plant height: 80-100 cm / 30-40 inches.



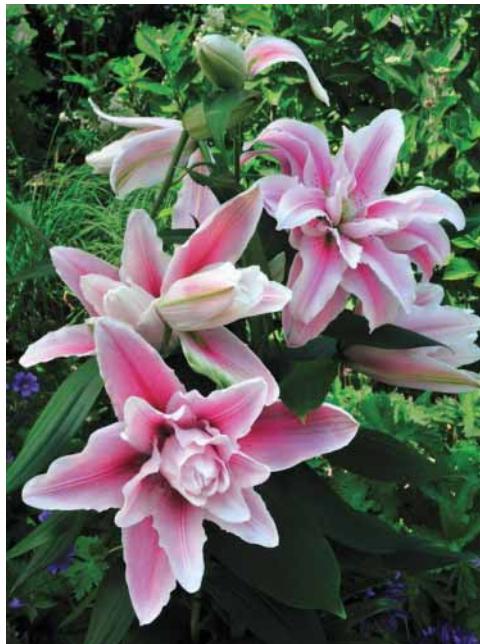
New
Varieties
Edition
1.



Oriental lily 'Rain Dance' We like 'Rain Dance' because it is very easy to grow in warmer climates. The flowers are large and upward facing. This variety is great for midsummer and fall production in the South and Southwest. A 16/18 bulb size will provide an average of 4-6 flowers.

Double Oriental lily 'Belonica' One of the first releases from the double Rose Lily series. This much-talked-about breakthrough was

preceded last year with the independent release of 'Lilytopia'. 'Belonica' goes a step further as it is a true double that is not only pollen free, but has a very faint but pleasant fragrance. If you create your own double-layered boutonnieres, the Rose Lily varieties will make work easier - no glue gun needed.



Oriental lily 'Tiger Woods' One of the crowd favorites at the 2010 Lilytopia Symposium. Its uniquely speckled flowers remind of us the earliest hybrids seen in the Oregon Bulb lily catalogs from the 1970s. 'Tiger Woods' is tall and has a decent bud count, with 4-5 buds from a 16/18 size bulb. This unique variety has great potential in the cut flower market.



Oriental lily 'Cocossa' This OT goldband hybrid is tall and strong with large flowers, with an average of 3-5 blooms from 16/18 size bulbs. OTs are known to be more heat resilient than regular Oriental hybrids, and 'Cocossa' is a good example of this. Though many goldbands have fallen by the wayside, 'Cocossa' is expected to survive the rigorous selection process on both the floral and bulb production sides.



Oriental lily 'Key West' A nicely balanced lily with deep pink coloration. Flower buds color up well and bud count is reasonable. 'Key West' has a pleasing contrast between the white center and the pink petals, with some spots in the centers. The variety forces more quickly, about one week faster than most Orientals.



Oriental lily 'Ribera' 'Ribera' has a strong stem, great bud count (4-6 count on a 16/18 bulb). The overall balance is excellent and it has a good vase life. It takes about 2-3 weeks longer to flower than 'Key West', but the pink color is softer, and more even across the flower. 'Ribera' is dependable but does not like the heat as much as 'Lake Carey' (see the New Varieties section in the Winter 2009 issue of *The Cut Flower Quarterly*).



New Varieties

Fred C. Gloeckner & Co.

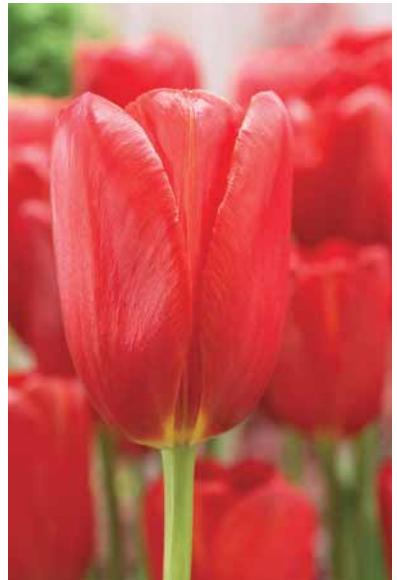
Double-flowering Oriental lily Every now and then something extra special is discovered in the hybrid lily world, such as double-flowering Oriental lilies. This new series offers some unique opportunities for your cut flower business.



Oriental x Trumpet lily 'Gluhwein' A unique color for lilies, described as "bubble gum". 'Gluhwein' will take fewer days to flower than most Oriental hybrids.



Lily 'Summer Breeze'
Pollen free. Brilliant yellow Asiatic lily with truly perfect flower form.



Tulip 'Sky High Scarlet'
This new single, late variety is the perfect American red color, and works into either standard forcing schedules or a 5-degree program, to really showcase the robust plant habit and huge red flowers.



Iris 'Discovery' This dark blue iris is the perfect cultivar for outdoor cut flower iris programs, producing superior results over 'Telstar' and other dark blue iris.



Basil 'Aromato' Purple-green bicolor cut flower basil, aromatic, classic mild basil flavor. 60 days to harvest, 20-28 inches.



Basil 'Cardinal' Exciting new basil for cut flowers. Scarlet flowers on strong, 20-25 inch stems. Dark green fragrant leaves. No pinching needed. Flowers in 60-70 days.



Iberis odorata 'Spray White' Pure white flowers on bushy plants are great for mixed bouquets. A white pinnacle type, about 12-16 inches tall.



Salvia judica 'Jerusalem Purple' Lilac flowers 20-25 inch purple stems. Crop time 90-100 days. Very productive, pinching not necessary.

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New Varieties

Jelitto Seed

Trollius x cultorum 'New Moon' Gorgeous, large, creamy-yellow blossoms. Plants grow to two feet with dark green vigorous foliage. Seed available as Gold Nugget™. Hardy in zones 3-7.



Eritrichium canum 'Baby Blues' (alpine forget-me-not) Large, brilliant blue blossoms on dense flower spikes. 'Baby Blues' is reliably first-year flowering from seed, so much so that it is best grown as an annual 10 inches tall and hardy in zones 4-7.



Delphinium 'Millenium Black-Eyed Angels' Brilliant semi-double white flowers with a black bee. Flowers first year from seed.

Delphinium 'Millenium Moonlight Blues' Medium blue semi-double flowers with blue and black striped bee.



Sanguisorba hakusanensis Dark pink arching flower spikes over grey-green foliage. 2 feet tall. For zones 4-8.

Lilium szovitsianum (Caucasus lily)
Fragrant yellow bell flowers and lanceolate foliage. Grows to about 4 feet tall. For zones 4-8.





Scrophularia macrantha (red birds in a tree) Showy crimson tubular flowers and rich green serrated foliage, very texturally ornamental. Shrubby habit. 2 feet tall. Zones 4-9.



Carex sparganioides (bur-reed sedge) Native to eastern North America and the Great Plains, the seedheads are very attractive on this easy-to-grow 2-foot sedge. Zones 4-9.



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'Romantic Antique' Nostalgic, fragrant blooms right from the garden! This sport of the popular 'Caramel Antique' produces salmon-colored blooms on upright stems. The variety gives good production of 40-60 cm (16-24 inch) stems, generally with 2-3 blooming side shoots. The vase life is 12 days.



'Spicy Antique' The newest member of the Antique collection. As with all Kordes Cutting Garden roses, it has an orderly and upright habit. Stems are 40-60 cm (16-24 inches) tall 2-3 side shoots. The apricot flowers are generally in clusters. It has a vase life of 8-10 days.



'Classic Fruitilia' Florists love the Fruitilia varieties, as they are a breeze to work with. As with the entire series, the plants are orderly and upright, and generally require minimal care. Stem lengths average 40-60 cm (16-24 inches), with abundant sprays of red hips. The 1 cm (+ 1/3 inch) diameter hips are perfectly sized for holiday wreaths and arrangements. The vase life is 28 days.



'Sweet Beauty' Light pink and very fragrant sport of 'Buxom Beauty'. This vigorous variety produces good numbers of large double blooms which are showcased by abundant dark green foliage. Average stem length 35-45 cm (14-18 inches). Vase life is 8-10 days.



'Toscana Freelander' The newest in the collection of red HT's, Toscana's high-centered flower buds unfurl to yield large dark red blooms. The variety gives good production of 40-60 cm (16-24 inch) stems, generally as single and upright stems. The foliage is dark green and abundant. The vase life is 10-12 days.



'Latin Pompon' Like other varieties in the collection, Latin yields abundant sprays of nostalgic 'Old English Garden' cherry red and white flowers. Stems average 40-70 cm (16-28 inches). The foliage is dark green and abundant. The flower vase life is 10-12 days.

'Pink Pompon'

This member of the Pompon collection yields sprays of a vibrant hot-pink colored blooms. The variety is vigorous and healthy, producing good numbers of multi-flowered stems that average 40-70 cm (16-28 inches). The vase life is 10-12 days.



'Red Pompon'

This variety yields large clusters of nostalgic orange-red flowers, dark green foliage and abundant sprays of blooms on stems averaging 40-70 cm (16-28 inches). The vase life is 8-10 days.

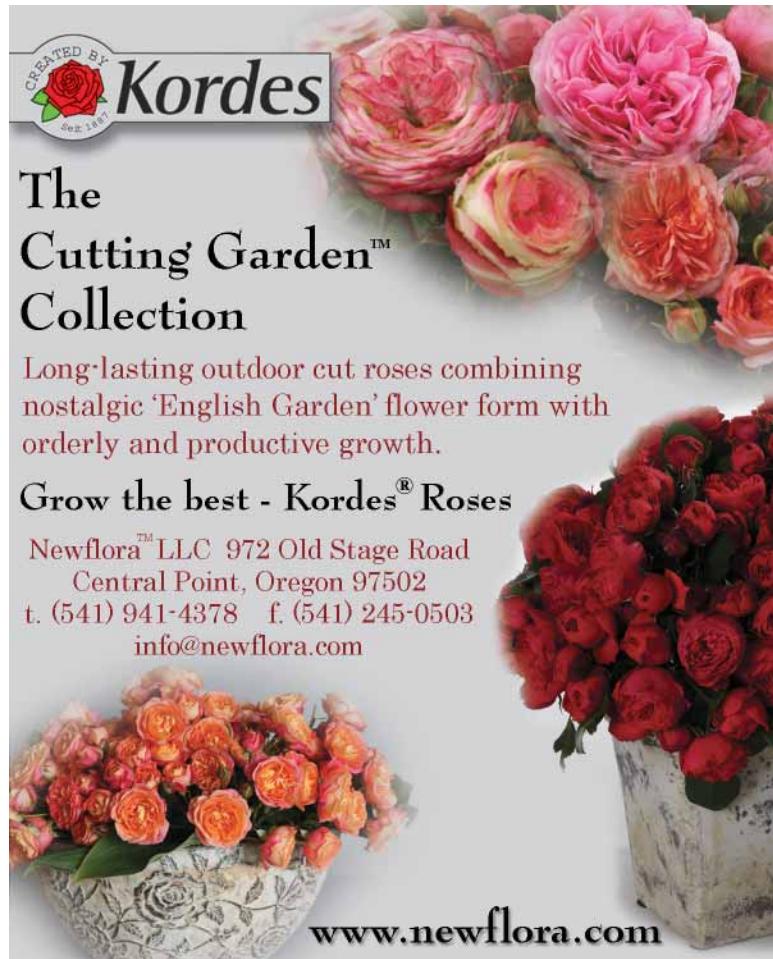
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New Varieties

Ball

Sunflower 'Carmel' Dark disk with yellow petals, pollenless and non-branching. More upright than 'Sunbright'. 50-60 inches tall.

Sunflower 'Galilee Adami' 50-65 inches tall, pollenless and non-branching. Dark disk with orange petals. Compare to 'Sunrich Orange'. Germination rate is +95%. Relatively daylength neutral.



Sunflower 'Tavor Flash' A remarkably long shelf life, flowers have dark disk with bicolored orange petals.

Sunflower 'Tavor Joy' Compared to 'Sunbright Supreme', more tolerant to mildews and better petal arrangement. 45-60 inches tall, pollenless and non-branching.

Sunflower 'Omri' Dark disk with orange petals, smooth leaved. Germination rate more than 95%.

Gypsophila 'Polar Bear Ice Flake'
This cultivar does not require additional lighting to flower, and is resistant to leaf miner. Its upright plant structure with long internodes prevents flower tangling.



Delphinium Triton series A programmable and uniform series. Features stems with large spikes, tightly packed with semi-double blossoms. Perfect complement for the Guardian series.



New Varieties

PanAmerican Seed

Stock Katz Series Similar to Japanese extra early-flowering types, Katz delivers a shorter crop time, uniform stem length and timing between colors, good color range, and better heat tolerance than European or traditional field types. Katz can be grown earlier or later in the season, and even year-round in some climates. The series is about 55 to 60% double flowering, with some selectability possible. Tunnel production is recommended for overall improved quality and for weather protection, so that programming is not affected by rain. 'Katz Apricot', 'Katz Bright Rose', and 'Katz Lavender Blue' are new color additions.



Snapdragon Maryland Series (Group 1,2) Well-suited to cool-season, low-light and low-temperature conditions, the energy-efficient Maryland varieties group well with our other Group 1,2 varieties for autumn, winter and spring programs. Well-defined flower spikes are produced on sturdy, clean stems. Suitable for greenhouse or field cut flower production. 'Maryland Orange' is a new color addition to the series; a true orange it has excellent, thick, strong uniform stems with well-formed full spikes.

Snapdragon 'Purple Twist' (Group 2) This unique novelty stand-alone variety adds a fun twist to your snapdragon program and can be an excellent component for making novelty florist bouquets. 'Purple Twist' can be produced under short days and moderate light conditions with night temperatures of 50 to 55°F. It can be scheduled and grown along with the Maryland series. Flowers are slightly fragrant and have a unique purple and white striped color pattern. The striped pattern varies depending on the growing environment; when grown in warmer greenhouse conditions, the white stripes are more dense and prominent, but when grown under cool outside/tunnel conditions, the purple is more dense and prominent.



2010 ASCFG

John M. Dole a



Those who have read these reports over the years may have noticed that we have an affinity for North American native plants that have made it into the big time. Sunflowers, zinnias, liatris, and lisianthus are all major cut flowers native to North America. One other species that might be added to the list is the marigold. This beloved garden plant has not been as fully accepted as a cut flower. The strong fragrance (read "odor" if you don't like it) of the foliage puts off customers and growers and the thick, heavily branched stems can be hard to cut efficiently. However, it might be time to rethink the marigold as a cut flower and consider its many positive traits. This year we had five cultivars from Gloeckner which were productive to a fault – they continued to produce many, many flowers all season long (too many according to the NCSU cut flower group). Marigolds show many similarities to zinnias - the first, and sometimes second flushes of the flowers should be sacrificed to allow the side shoots to get long enough to harvest. The flower heads are hollow where they meet the stems and are easy to pop off. After plants reach harvestable size the quality stems can be cut every couple of days and the beds cleaned of unmarketable flowers.

The large yellow to orange flowers quickly filled out bouquets and arrangements. The flowers have a respectable vase life of 8 to 14 days, depending on the cultivar (see postharvest article for more details) and use of a floral preservative.

Alas, the trial cultivars had the typical strong fragrance, which prompted one trialer to note that selling marigolds was a "love/hate affair". For many trialers, all the cultivars were too short, but several cut 30-inch stems. For us, the tallest cultivar was 'Narai Yellow'.

Several species of *Scabiosa* are used as cut flowers, but all are relatively unimportant because of short stems (*Scabiosa caucasica* and *S. stellata*) or small flower heads (*S. atropurpurea*). *Scabiosa caucasica* has the largest

Cut Flower Seed Trials

and Caroline Richardson, North Carolina State University
Judy M. Laushman, ASCFG



flowers of the three and is available in white, pink, and close to a clear blue. Benary submitted four scabiosas in the trial – two improved varieties and two older comparison varieties. ‘Fama Deep Blue Improved’ was one of the top scoring cultivars for its large blue flowers, first-year flowering for most trialers and longer stems. While we had a hard time telling it apart from ‘Fama Deep Blue’, one trialer noted that the petals were “slightly darker than ‘Fama Deep Blue’” with some pink in the center and another noted that ‘Improved’ had more petals. ‘Fama White’ and ‘Perfecta’ were also similar and scored well with trialers. More than one respondent noted that the scabiosa make excellent wedding flowers for the white color and lace-hankie textures.

Of the three celosias in the trial, ‘Red Flame’ (Genesis) scored the highest. Trialers loved the deep red color of the flowers, leaves and stems and noted that many small to medium sized heads were produced on the side shoots. An average of 7 stems was harvested per plant and they were a little over 17 inches long. Some growers got up to 10 stems per plant and 24-inch stem lengths. Two other celosias in the trials, ‘Celway Purple’ and ‘Celway Terracotta’ (Kieft-Pro-Seeds) also had small flower heads, but a lot of them. Growers harvested 8 to 9 stems per plant with some getting 20 stems. The stems averaged 21-23 inches long.

Zinnia ‘Queen Red Lime’ (Benary) prompted discussion in our research group. I loved the subtle color and high degree of doubleness, while the rest of the group was not as impressed with its small flower size (relative to ‘Giant’ and ‘Uproar Rose’) and the fact that the color became a bit muddy a few days after harvest. The outer petals were an unusual maroon pink blending to the greenish color of the inner row or two of petals. In contrast, the centers were bright rosy pink. Trialers were also a bit split on this one, echoing the same likes and dislikes as we did, but overall, they liked it as they gave it one of the higher ratings in the trials. The companion submission, ‘Giant Lime’, also scored very high. While many cut flower growers are familiar with ‘Giant Lime’

it was nice to have it in the trials again. ‘Giant Lime’ has smaller flowers than the rest of the Giant series but produces more doubles than other green cultivars.

The lone sunflower in the national trials, ‘Summer Breeze’ (Takii), was a hit with trialers. It has large bright yellow flowers with green centers. The stems were as long as you want them. Plants were not branched, producing one flower per plant. No reports on the effects of pinching.

All of the stock cultivars did fairly well this year, but the top scoring color was ‘Katz Bright Rose’ (Ball), which was quite popular. Growers also loved the fragrance and the high percentage of doubles. However, one person noted only 42% doubles.

Both forms of snapdragons were in the trials this year. The regular snapdragons ‘Calima Pure White’ and ‘Calima Yellow’ (Sakata), were among the top-rated flowers with long stems averaging 17 inches, but up to 26 inches for some. Note that these data were for field production as greenhouse-grown snaps grow much taller. Growers averaged 5 to 6 stems per plant, with some getting up to 12 stems. Open-face snaps were represented by ‘Chantilly Yellow’ (Takii) with its bright yellow color. Stem length also averaged 17 inches (up to 30 inches for some), but growers were able to harvest more stems, 8 per plant.

The three dianthus ‘Fandango’ submissions from Goldsmith produced flowers prolifically with an average of 12 stems per plant, and up to 35 stems per plant for one trialer. The gorgeous flowers were in rich reds, purples and bicolors and prompted many positive comments. The drawback – and there is always at least one – is that the stems were very short, averaging 12 inches. Some growers were able to get 18-inch stems, suitable for bouquets.

As in many previous years several lisanthus were trialed. The top-rated cultivar this year was ‘Excalibur Yellow’ (Sakata). It had the substance and durability of ‘Excalibur White’, but with a clear lemon color. Other trialers thought

The outer petals of zinnia ‘Queen Red Lime’ were an unusual maroon pink blending to the greenish color of the inner row or two of petals. In contrast, the centers were bright rosy pink.

the color was more ivory than yellow. ‘Excalibur Yellow’ was one of the tallest lissies in the trials this year, with an average stem length of 24 inches and two trialers getting a stem length of 30 inches. Growers harvested a little over three flowers per plant. ‘Vulcan II Deep Purple’ (Takii) also performed well, with high ratings and an average stem length of 22 inches.

Eight companies supplied 56 cultivars. Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year. Rankings are based on the

Cut Flowers of the Year and will join other nominations from ASCFG members.

Interpreting the trial results: The numbers reported are averages of all the respondents and many factors will affect the success of any plant species. Our

participants are growing and harvesting the trial plants in a wide variety of ways. After looking at the average, check the range of responses listed below each number to see how the cultivar performed at its

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

Acknowledgments: A hearty thank you to all 29 evaluators who returned their trial

reports and to the seed companies for providing such great cultivars. Congratulations to Dave Delbo for being the first trialer to return his evaluations. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials, Brigitte Crawford, Erin Regan, Diane Mays, Michelle McElhannon, Brad Holland, and Tim Ketchie for assisting with the NCSU trials, Caroline



‘Queen Red Lime’

combined ratings score: market appreciation (average of wholesale, florist, and consumer) + repeat again + ease of cultivation. Thus, from the 2010 trials, snapdragons ‘Calima Pure White’, ‘Calima Yellow’ and ‘Chantilly Yellow’, sunflower ‘Summer Breeze’, and zinnia ‘Benary’s Giant Lime’ are nominated as

Richardson for laboriously condensing the comments and data, and Linda Twining for reformatting the tables. In preparing the report we have edited the participants’ comments for space and clarity; my apologies if we’ve altered the tone or content of anyone’s comments.

Participating Seed Companies

American Takii

Salinas, California
www.takii.com

Ball Horticultural

West Chicago, Illinois
www.ballhort.com

Benary Seed

DeKalb, Illinois
www.benary.com

Fred C. Gloeckner & Company

Harrison, New York
www.fredgloeckner.com

Genesis Seeds Ltd.

Ashalim, Israel
www.genesisseeds.com

Goldsmith Seed

Gilroy, California
www.goldsmithseeds.com

Kieft-Pro-Seeds

Venhuizen, Netherlands
www.kieft-pro-seeds.com

Sakata Seed America, Inc.

Morgan Hill, California
www.sakata.com

Participating Growers

Cynthia Alexander
Bloomlust
Frisco, TX

Janet Bachmann
Riverbend Gardens
Fayetteville, AR

Erin Benzakein
flore^t
Mount Vernon, WA

Christof Bernau
UCSC Farm & Garden
Santa Cruz, CA

Leon Carrier
Plantmasters
Laytonsville, MD

Maureen Charde
High Meadow Flower Farm
Warwick, NY

Josie Crowson
Josie's Fresh Flowers
Nacogdoches, TX

Shravan Dasoju
Ball Horticultural Company
Santa Paula, CA

Dave Delbo
Dave's Flowers
Elysburg, PA

Becky Devlin
Roost Flowers and Designs
Virginia Beach, VA

Linda Doan
Aunt Willie's Wildflowers
Blountville, TN

Everett Emino
Everett's Flower Farm
New Germany, NS

Thea Folls
Foll's Flower Farm
Auburn, NY

Chas and Linda Gill
Kennebec Flower Farm and Nursery
Bowdoinham, ME

Charles Hendrick
Yuri Hana Flower Farm
Conway, SC

Chazz Hesselein
Alabama Cooperative Extension System
Mobile, AL

Laurie Hodges
Dept. Agronomy and Horticulture
Lincoln, NE

Kathy Horn
CELEBRATE! Gardens
Lindenwood, IL

Ingram McCall/John Dole
North Carolina State University
Raleigh, NC

Jim Mercer
Sheepscot Flower Farm
Newcastle, ME

Don Mitchell
Flora Pacifica
Brookings, OR

Catherine Mix
Sequim Growers Cooperative
Sequim, WA

Tom Parker
Parkerhouse Nursery
Mays Landing, NJ

Ed Phillips
Field and Flower
Piedmont, SC

Judith Reith-Rozelle
West Madison Ag. Research Station
Verona, WI

Brenda Smith
Smith & Smith Farms
Dayton, NV

Cheryl Wagner
Wagner's Homestead Farms
Belleville, MI

Chris Wien
Cornell University
Ithaca, NY

Bob Wollam
Wollam Gardens
Jefferson, VA

2010 ASCFG Seed Trial Results. The first row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed, either only one person responded for that category or several responded and all gave the same rating. The single highest score and the single lowest score in each category for each cultivar have been dropped.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ^①	Repeat again rating ^①	Ease of cultivation rating ^①	Average postharvest life (days)
<i>Amaranthus caudatus</i> 'Mira' Gloeckner	4.6 1-10	32.9 12-66	2.9 1-4	3.1 1-5	3.6 1-5	10.4 5-18
<i>Asclepias tuberosa</i> 'Oro' Genesis Seeds	4.6 1-7	12.2 8-24	3.1 1-5	3.3 1-5	3.2 1-5	9.0 4-14
Aster 'Nina Semi Double Rose' American Takii	4.8 1-10	16.2 8-30	4.3 3-5	3.9 2-5	3.4 2-5	10.8 7-14
Aster 'Nina Semi Double Salmon Pink' American Takii	5.8 1-10	18.0 12-23	4.2 3-5	3.7 2-5	3.8 2-5	9.3 7-14
Aster 'Nina Semi Double White' American Takii	5.2 1-12	19.0 12-25	3.8 3-5	3.7 2-5	3.8 2-5	12.8 7-20
Aster 'Palette Mix' Gloeckner	5.0 1-2	17.3 10-30	4.0 3-5	3.5 2-5	3.2 1-4	10.3 5-21
Campanula 'Campana Deep Blue' Kieft-Pro-Seed	4.5 1-12	18.3 10-29	4.0 3-5	3.7 2-5	3.8 3-5	11.4 7-18
Campanula 'Campana Pink' Kieft-Pro-Seed	5.1 1-15	18.1 12-22	4.1 3-5	3.8 2-5	4.0 3-5	11.4 7-14
Carthamus 'Orange Granade' Genesis Seeds	3.3 1-7	17.5 12-30	3.4 2-5	3.3 1-5	3.4 2-5	7.4 5-10
Celosia 'Celway Purple' Kieft-Pro-Seed	9.8 1-20	22.7 12-30	3.6 2-5	3.6 1-5	4.1 2-5	8.2 5-10
Celosia 'Celway Terracotta' Kieft-Pro-Seed	8.8 1-20	21.2 12-24	3.7 2-5	3.7 1-5	4.5 3-5	9.6 5-10
Celosia 'Red Flame' Genesis Seeds	7.6 1-10	17.2 12-24	3.9 2-5	4.1 2-5	4.3 3-5	9.8 5-21
Dianthus 'Fandango Crimson' Goldsmith Seeds	8.1 1-35	12.2 8-18	3.0 1-4	2.5 1-5	4.1 1-5	7.1 3-14
Dianthus 'Fandango Crimson Picotee' Goldsmith Seeds	9.8 1-35	11.6 6-18	3.1 1-5	2.5 1-5	4.2 1-5	8.2 5-14

^①1 to 5 scale, with 5 being the best. Market ratings are based on sales to wholesalers, retailers, or final consumers direct.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ^①	Repeat again rating ^①	Ease of cultivation rating ^①	Average postharvest life (days)
Dianthus 'Fandango Purple Picotee' Goldsmith Seeds	9.3 1-15	12.2 6-18	2.9 1-4	2.5 1-5	4.0 1-5	8.6 5-14
Dianthus 'Sweet Red with White Eye' Ball	8.0 8-15	14.3 6-24	3.6 2-5	3.3 1-5	4.0 1-5	21.6 7-14
Dianthus 'Volcano Mix' Genesis Seeds	6.3 1-12	15.4 8-24	3.4 2-4	3.3 1-5	4.3 2-5	9.8 5-15
Iberis 'Spray' Genesis Seeds	3.1 1-10	10.8 6-22	2.7 1-4	2.2 1-5	3.1 2-5	7.3 5-9
Kale 'Lucir Red' American Takii	1.8 1-5	16.0 8-36	2.8 1-4	2.5 1-4	3.5 1-5	8.7 6-12
Kale 'Lucir White' American Takii	1.0 1-5	17.9 8-36	3.3 1-5	3.2 1-5	3.4 1-5	12.4 6-18
Larkspur 'Galilee Carmin' Genesis Seed	3.3 1-7	19.0 8-4	3.9 2-5	3.5 1-5	7.0 6-8	13.5
Lisianthus 'ABC 1-3 Green' Ball	2.7 1-7	19.6 4-28	4.1 3-5	3.8 1-5	3.2 1-5	13.3 10-16
Lisianthus 'ABC 1-3 Misty Blue' Ball	2.6 1-7	16.9 4-21	4.3 4-5	3.9 1-5	3.3 1-5	13.0 10-16
Lisianthus 'Arena III Red' American Takii	2.2 1-4	21.9 14-29	4.0 3-5	3.4 1-5	3.0 2-4	13.5 13-14
Lisianthus 'Arena IV White' American Takii	2.8 1-4	21.3 8-28	4.0 3-5	3.4 1-5	3.0 2-4	12.0 12
Lisianthus 'Excalibur Pure White' Sakata Seed	2.8 1-6	21.6 12-30	4.0 3-5	3.9 2-5	3.4 2-5	12.0 7-14
Lisianthus 'Excalibur Yellow' Sakata Seed	3.3 1-6	23.2 10-30	4.3 4-5	4.2 3-5	3.4 2-5	12.2 7-16
Lisianthus 'Mariachi Carmine' Sakata Seed	2.9 1-6	16.5 8-26	4.0 3-5	3.9 2-5	3.7 3-5	11.5 6-14
Lisianthus 'Mariachi Pink Picotee' Sakata Seed	2.8 1-6	22.5 8-30	4.3 3-5	4.0 2-5	3.2 2-4	11.5 6-14

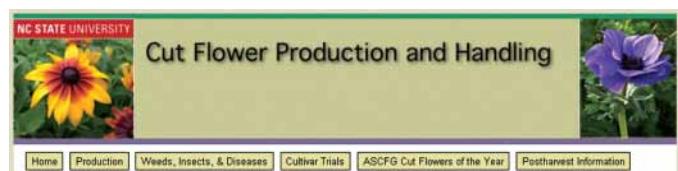
^①1 to 5 scale, with 5 being the best. Market ratings are based on sales to wholesales, retailers, or final consumers direct.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ^①	Repeat again rating ^①	Ease of cultivation rating ^①	Average postharvest life (days)
Lisianthus 'Mariachi Yellow Imp.' Sakata Seed	3.4 1-6	23.1 8-30	3.8 1-5	3.4 1-5	3.0 1-4	11.0 6-14
Lisianthus 'Piccolo 2 Pure White' Sakata Seed	3.1 1-5	19.3 10-28	3.4 1-5	3.0 1-5	3.1 1-4	13.0 17
Lisianthus 'Piccolo 2 Purple' Sakata Seed	3.0 1-5	18.2 10-28	3.3 1-5	2.7 1-5	2.9 1-4	17.0 17
Lisianthus 'Rosita 2 Jade' Sakata Seed	3.1 1-6	19.7 8-29	3.7 2-5	3.9 2-5	3.6 3-5	13.0 7-18
Lisianthus 'Rosita 2 Purple' Sakata Seed	2.8 1-6	17.8 8-31	3.9 2-5	3.9 2-5	3.5 3-5	11.2 7-14
Lisianthus 'Vulcan II Deep Purple' American Takii	2.3 1-4	22.1 16-31	4.3 3-5	4.0 2-5	3.6 3-4	13.0 12-14
Marigold 'American Babuda Deep Gold' Gloeckner	6.1 1-10	19.0 10-32	3.6 2-5	3.7 2-5	4.2 2-5	9.5 5-16
Marigold 'American Babuda Yellow' Gloeckner	5.9 1-16	17.7 10-31	3.3 2-5	3.0 1-5	4.2 2-5	8.7 5-16
Marigold 'American Bali Yellow' Gloeckner	4.1 1-7	14.7 6-29	3.1 1-5	2.8 1-5	4.1 2-5	10.4 7-16
Marigold 'American Narai Yellow' Gloeckner	6.0 1-10	15.1 10-30	3.4 2-5	3.1 2-5	4.1 2-5	9.5 7-16
Marigold 'American Pagoda Yellow' Gloeckner	4.6 1-10	14.3 10-23	3.7 2-5	3.3 2-5	4.4 3-5	9.1 7-15
Matthiola 'Katz Apricot' Ball	1.0 1	17.9 12-24	3.6 2-5	3.7 2-5	4.6 4-5	8.9 7-10
Matthiola 'Katz Bright Rose' Ball	1.2 1-3	17.0 10-25	4.0 3-5	3.7 3-5	4.3 4-5	7.8 7-10
Matthiola 'Katz Lavender Blue' Ball	1.4 1-3	17.3 13-24	4.0 3-5	3.5 3-5	4.0 3-5	7.5 7-10
Molucella 'Country Bells' Genesis Seeds	5.1 1-15	17.6 10-32	3.9 2-5	3.7 1-5	3.6 2-5	7.8 5-10

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

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating ^①	Repeat again rating ^①	Ease of cultivation rating ^①	Average postharvest life (days)
Scabiosa 'Fama Deep Blue' Benary	5.9 2-15	16.1 9-24	3.9 3-5	4.0 3-5	3.9 3-5	8.0 7-9
Scabiosa 'Fame Deep Blue Imp.' Benary	9.5 3-25	18.8 8-30	4.3 4-5	4.3 3-5	4.1 1-5	8.4 7-11
Scabiosa 'Fama White' Benary	4.4 1-8	13.5 11-36	3.6 3-5	3.6 1-5	3.9 3-5	6.8 5-9
Scabiosa 'Perfecta White' Benary	5.8 1-10	12.3 10-32	3.8 3-5	3.6 2-5	4.0 3-5	8.0 6-10
Sea oats 'Green Oat' Genesis Seeds	7.8 4-12	22.8 6-28	3.6 1-4	3.1 1-5	3.1 1-5	7.3 4-10
Setaria italica 'Red Jewel' Gloeckner	10.7 1-40	22.2 12-40	3.3 2-4	3.9 2-5	4.5 3-5	10.8 7-14
Snapdragon 'Calima Pure White' Sakata Seed	5.4 1-12	17.5 10-22	4.0 3-5	4.0 3-5	4.4 4-5	6.3 5-8
Snapdragon 'Calima Yellow' Sakata Seed	6.7 1-12	17.0 12-26	4.2 3-5	4.1 3-5	4.3 3-5	6.0 5-8
Snapdragon 'Chantilly Yellow' American Takii	8.4 1-35	17.2 8-30	4.0 3-5	4.2 3-5	4.4 3-5	7.1 6-10
Sunflower 'Summer Breeze' American Takii	1.0 1	55.2 22-72	4.6 4-5	4.1 2-5	4.5 2-5	8.9 7-14
Zinnia 'Benary's Giant Lime' Benary	9.8 3-25	19.1 12-30	4.2 2-5	4.1 2-5	4.5 2-5	7.7 2-16
Zinnia 'Queen Red Lime' Benary	8.9 2-25	16.3 10-30	4.1 2-5	3.9 2-5	4.5 1-5	7.2 3-16

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



NCSU Cut Flower Website Updated

Have you ever wondered if *Pycanthemum* 'Mountain Mint' would make a good cut flower? How about *Eupatorium* 'Carin', *Weigelia* 'Alexandra', or *Lavatera* 'Salmon Beauty'? The place to find the answers to these questions and many more is www.ncsu.edu/project/cutflowers/. You can find all the seed

trial results since 1993 and the perennial and woody trial results since we started those trials in 1998 and 2004, respectively. For each cultivar, you will find the trial data, participant comments, supplier and photos, in some cases. Beside trial information, the website also includes our postharvest reports and links to other sites.

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.

Amaranth

Amaranth 'Mira' (Gloeckner)

Good Qualities: Strong stems (2); Easy to grow (2); Novel, striking appearance; Good accent in large bouquets; Interesting mix of purple and green; Thick, spiraling, two-toned tails; Funky; Popular with floral designers and individuals looking for the unusual; Vigorous, nice color, multiple stems/plant.

Problems: Leaves were attacked by an unknown insect (2) and were full of holes. Most leaves had to be removed; Leaves yellow prematurely in field, due to root rot; less severe in tunnel; Weak lanky growth; Difficult to support (took 3 layers of netting) tall plant, not popular with most market customers; Thick and chunky; Not a lot of color in the inflorescence, appearance varied from plant to plant; Plants died after transplanting to field; Very large, requires a special market to utilize effectively. Unable to use it in bouquets due to its large size. However, I did bunch it in 5-stem bunches and bring it to the market. It attracted a lot of attention and comment. However, it never attracted a buyer; Stems droop/falls over after harvest.

Similar Species: Amaranth 'Love Lies Bleeding'.

Postharvest Recommendations: Fleshy stems, so the vase water should be changed regularly; Use postharvest products.

Additional Comments: Does not fit my market; Stems reached 38 inches in height and were cut down to 26 inches; May be more productive if pinched; Used it a lot late in season and dried; Died from lack of water; Leaves wilted and turned brown but flowers still looked really nice.

Asclepias

Asclepias *tuberosa* 'Oro' (Genesis)

Good Qualities: Beautiful shade of pure orange (6); ball shape was attractive and versatile; long lasting; Seed pods may be useful; Long vase life; unusual filler in mixed bouquets; Loved that I could grow this from seed; Will be stronger next year I'm sure.

Problems: Too short for us to properly evaluate as a cut (4); Aphids (3); Seedlings did not survive transplanting (2); Very sprawling growth habit; Need to stake; Heads were on small side; Most plants did not hold up well in our wet climate ('Silky' series of asclepias held up well in same conditions); Would try to grow again; Never flowered.

Similar Species: Silky series.

Postharvest Recommendations: Cut into plain water; Use Floralife; Conditioning overnight is a must; Seal the ends by dragging them across the soil before placing them in water; Do not leave buckets in the hot sun very long.

Additional Comments: Hope they will come back next year (2); With a very dry summer and no irrigation, the plants did not yield any blooms this year (2); This was one of my top 5 favorites.



'Oro'



'Nina Semi Double Rose'

Aster 'Nina Semi-Double Salmon Pink' (Takii)

Good Qualities: Great color (2); Excellent filler (2), Popular with customers (2); Multiple blooms on each stem.

Problems: Too short (2); Root rot (fusarium?); Rust.

Similar Species: 'Palette Mix'.

Postharvest Recommendations: None.

Additional Comments: Plants grew under a fabric-covered row tunnel from transplanting to first flower to protect against leafhopper-carried aster yellows disease. That succeeded, but root disease (fusarium?) still killed the plants.

Aster 'Nina Semi Double White' (Takii)

Good Qualities: Excellent filler (2); Large spray of small blooms; Taller than most Chinese asters previously grown; Productive; Very pretty.

Problems: Too short (2); Root rot (fusarium?); Rust.

Similar Species: 'Palette Mix'.

Postharvest Recommendations: None. Additional Comments: Crop failure; Aster yellows.

Aster 'Palette Mix' (Gloeckner)

Good Qualities: Excellent color mix (4); Nice sprays; Wonderful filler for bouquets; Great vase life.

Problems: Fusarium wilt and root rot (3); Too short (3) and too many unusable stems; Aster yellows (2); Rust (2); Plants died slowly after transplanting to field; Difficult to germinate.

Similar Species: China asters.

Postharvest Recommendations: Floralife and cool water; Put in shade soon after cut. Additional Comments: Plants grew under a fabric-covered row tunnel from transplanting to first flower to protect against leafhopper-carried aster yellows disease (2). That succeeded, but root disease (fusarium?) still killed the plants; Not much success with any aster this season; Palette Mix (along with other asters) takes a long time to flower. Field-planted transplants from 108 trays during the third week in May - began cutting on August 14th. I tried direct seeding a row and germination was spotty. I hope more disease resistance can be built into asters as they are such a great cut.

Campanula

Campanula 'Campana Deep Blue' (Kieft)

Good Qualities: Nice color (more purple than blue) (4); Good vase life (4); Very productive (2); Strong stem; Attractive upward-facing cups, continued to open in vase.

Problems: Shorter than 'Campana Blue' (2); Flowered about a week later than Champion series (2); Poor germination; Thrips magnet.

Postharvest Recommendations: Cut when buds are colored but still closed; Use postharvest products.

Similar Species: Champion series.

Additional Comments: Customers loved these, many had never seen a bellflower; I prefer 'Campana Pink' to 'Campana Blue'; Died due to lack of water.

Campanula 'Campana Pink' (Kieft)

Good Qualities: Beautiful, clear, pink especially nice for bridal bouquet work (4); Very productive (3); Good stem length (2); Very long vase life.

Problems: Thrips magnet; It can't take the heat, would have done better planted much earlier than March; Short stem length below flowers (3); One week later than Champion series.

Postharvest Recommendations: Cut in colored bud; Use postharvest products.

Similar Species: Champion series.

Additional Comments: Died due to lack of water.



'Campana Pink'

Carthamus

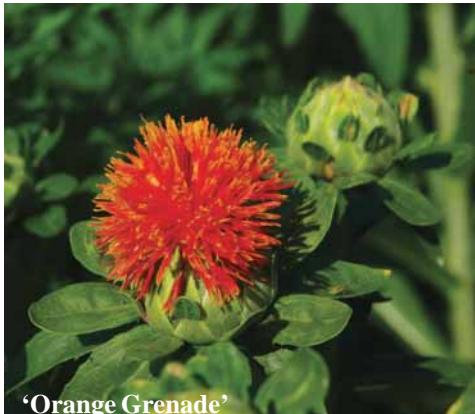
Carthamus 'Orange Granade' (Genesis)

Good Qualities: Beautiful orange color (5); Good, rigid stems (2); Large seed head that dried well (2); Unique texture for bouquets.

Problems: Planted in March, but by the time they bloomed, I think it was too hot for them; Will try again with an earlier planting; A total failure, not due to the plant, but rather to deer. The day after planting the deer jumped the fence and ate off all the carthamus right down to the roots; Planted it late, sat in plug tray too long; Short stems; Lots of stem, but very little flower; Looked like a weed; Aphids; Hard to harvest due to thorns. Had 2-3 plants that were taller than rest of the population.

Similar Species: 'Tall Lasting Orange' from Modena.

Postharvest Recommendations: Cut flower before too open to extend vase life (3); Put stems immediately into water; Use Floralife and room temperature water.



'Orange Grenade'

Additional Comments: Color changed from yellow to orange as it grew; Multiple flowers per stem; Also planted *Carthamus 'Granade Series Mix'* from Germania for comparison and these were no better. I had no marketable stems from either variety; Was set out late due to heavy rain delays; Would not grow again.

Celosia

Celosia 'Celway Purple' (Kieft)

Good Qualities: Long, strong stems (4); Great color (4), vibrant magenta-purple; Kept producing if kept cutting (3); Very uniform in quality (3). Small leaves (2); Prolific bloomer; Long-lasting; Liked the multifaceted head; Good filler in mixed bouquets; Veins and edges of leaves unique because they are a reddish/purple; Attracts *Tachinidae* flies that parasitize cabbage looper; Can plant more densely than other celosias; Branched with thin stems that the florists prefer.

Problems: Flower heads never quite look mature; Low vigor; Has a branched Christmas-tree shape requiring a choice of one tall 30-inch cut of the whole plant, or cutting short 12 to 18-inch branches; Foliar disease.

Similar Species: Has the deep magenta color of 'Cramer's Amazon' at 1/4 the size (2); 'Celway Terra Cotta'.

Postharvest Recommendations: Chrysal Pro #1; Floralife and cool water; Also good dried. Additional Comments: Plants get about 4-6 inches bigger than 'Celway Terra Cotta'; Most branches were bundles of spikes at the tip, but almost every plant displayed a sport of a crested form on the lowest branch.

Celosia 'Celway Terra Cotta' (Kieft)

Good Qualities: Nice color (4); Long sturdy stems and uniform stem length (4); Long-lasting (3); Very productive (3), Liked the multifaceted head (2); Early plume type; Not as much seed drop after harvest; Attracts *Tachinidae* flies that parasitize the cabbage looper; Can plant more densely than other celosias; Small leaves; Uniform in bloom size and time of blooming.

Problems: Color washed out (2); Ugly color and form; Short stems; Same as 'Celway Purple'; some plants bloomed, several plants had wide, fasciated stems.

Similar Species: Celosia 'Enterprise'.

Postharvest Recommendations: Chrysal Pro #1; Floralife and cool water; Also good dried.

Additional Comments: A keeper for color mixing; One of my top 5; Flowers lasted a lot longer than the leaves; A few inches shorter than 'Celway Purple'.

Celosia 'Red Flame' (Genesis)

Good Qualities: Nice deep red color including stems and leaves (4); Nice long stems (2); Very prolific, lots of medium and smaller heads that worked nicely in bouquets; Productive over the whole season; Shape is more *spicata* than *cristata*. Good vase life.

Problems: Plants are top-heavy and stems could not support them.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Put in shade shortly after cutting.

Additional Comments: Deer ate it late in the season; Didn't attract *Tachinidae* flies like the Celway line; When planted in pots the plants didn't get as big but the flowers were much bigger; Seedlings seemed stunted with curled leaves at planting, but they grew out of it.

Dianthus

Dianthus 'Fandango Crimson'

(Goldsmith)

Good Qualities: Nice deep red/crimson color.(4); Long vase life (3); Lots of stems per plant (2); Some fragrance (2); Would make a lovely bedding plant; Good germination and seedling vigor; Larger florets and more disease resistant than other Fandango varieties.

Problems: Too short (7); Not as prolific a bloomer as 'Fandango Purple Picotee'; Did not germinate well; Tedious to cut with small stems so usually cut whole plant back at one time.

Similar Species: Other 'Fandango' dianthus.

Postharvest Recommendations: Did not use an ethylene inhibitor which it may require. Individual blossoms in the flower head went down fast; Use postharvest products.

Additional Comments: A stunning bedding plant but too short for cut flowers; Used only in small farmers' market bouquets; We'll see if it overwinters and yields longer stems next year.

Dianthus 'Fandago'

Crimson Picotee'

(Goldsmith)

Good Qualities: Very nice dark pink/white edging (4); Would make a lovely bedding plant (2); Prolific blossoms (2), continuing beyond light frosts; Mild fragrance (2); Good germination and seedling vigor; Lots of stems per plant.

Problems: Short stems (6); Time-consuming to pick (2); Not suitable as cut flowers; Would be good as a bedding plant; Combination of the bicolor and frilliness of the



'Celway Terra Cotta'

flowers may limit its usefulness; Susceptible to disease; Colors faded a little after being in vases and became very hard to tell apart from 'Fandango Purple Picotee'.

Similar Species: Other 'Fandango' dianthus.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Too short (3), but kept blooming; Nice bicolor; Slightly longer postharvest life than 'Fandango Purple Picotee'; Will leave in the ground over winter and see if they produce longer stems next spring.

Dianthus 'Fandango Purple Picotee'

(Goldsmith)

Good Qualities: Would make a lovely bedding plant (3); Prolific bloomer (3), old-fashioned look; Good vase life (2); Beautiful burgundy and purple colors with a nice scent; Uniform stem length.

Problems: Even with cutting back, stems were still way too short (5); Low germination.

Similar Species: Other 'Fandango' dianthus.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Used primarily in small farmers' market bouquets; Wide range of stem length; Seemed to be more flowers per stem than other dianthus; Will leave in the ground over winter and see if they produce longer stems next spring.

Dianthus 'Sweet Red and White Eye' (Ball)

Good Qualities: Wonderful color (4); Nice fragrance (2), Very prolific (2); Strong stems (3); Great in bouquets (2); Large flower head.

Problems: Stems too short (7); Nuisance to harvest, strip and bunch; Fungal disease; Did not do well in the Southern heat; Much prefer to grow the Neon series of dianthus. For early flowering Hollandia and Electron have taller stems than the Sweet. Don't know if Sweet will overwinter but we have left it to see.

Similar Species: Biennial sweet William.

Postharvest Recommendations: None.

Additional Comments: A nice addition to the Sweet series.

Dianthus 'Volcano Mix' (Genesis)

Good Qualities: Nice mix of colors (5); Good vase life (2), Strong stems (2); Large flower heads.

Problems: Most stems too short (3); Unable to set this out early due to excessive rains. It languished in the heat and did not yield any salable stems; About one-fourth of the plants got bigger but never developed stems so may be reverting back to biennial life cycle; Mixed colors, prefer one color.

Similar Species: Similar to Hollandia (2); Biennial sweet Williams.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Bloomed from late June to mid-July when other dianthus had finished.

Iberis

Iberis 'Spray' (Genesis)

Good Qualities: Bright white color (4); Good fragrance (2), Holds well in hand-tied bridal bouquets; Bees loved it, though this led to quick pollination and petal drop.

Problems: Very short, most stems not usable (6).



'Volcano Mix'

Similar Species: *Iberis amara* ‘White Pinnacle’ and *Iberis amara* ‘Iceburg Superior’.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Will try this again next year (2) in hopes of longer stems.

Kale

Kale ‘Lucir Red’ (Takii)

Good Qualities: Smaller heads (3) made this cultivar easier to use in bouquets than the Crane series; Unique flower head that filled a bouquet; Thin stems easier to arrange.

Problems: Water smelled and needed to be changed more often than other flowers (2); Into October and heads still not colored (2); Stem length was sporadic; A little inconsistent in head size; Very susceptible to flea beetles that disfigure leaves; Flowers didn’t develop correctly.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Chrysal CVBN; Do not cut in the heat.

Additional Comments: Our customers didn’t seem to know what to do with this product. We cut a few stems and used them as novelty ‘flowers’ but we won’t grow it again; Leaves lack normal waxy bloom, may be reason for flea beetle susceptibility?

Kale ‘Lucir White’ (Takii)

Good Qualities: Tight head (3); Easy to mix into bouquets (3); Slightly earlier to show color than ‘Crane Bicolor’; attractive white center; thin stem facilitates arranging; Shiny round leaves; Less insect damage than the Cranes; Looks similar to a rose when tucked into a dense bouquet; Long vase life; Shiny, dark green foliage.

Problems: Thin stems need support (2); Into October heads still not colored; Head size was sometimes inconsistent; Susceptible to flea beetles; Foul-smelling water needed to be changed often; Had to spray repeatedly for various worms.

Similar Species: ‘Crane’; ‘Sunrise’; ‘Sunset’.

Postharvest Recommendations: Chrysal CVBN; Floralife and cool water; Wilts if cut/ displayed on hot days.

Additional Comments: Lovely but took up a lot of room in the display gardens; Positive customer response.

Larkspur

Larkspur ‘Galilee Carmin’ (Genesis)

Good Qualities: Beautiful pinkish red color (3); Tall, uniform blooms; Good vase life; Great in bouquets and small arrangements.

Problems: Poor germination (3); Too short (2); Some powdery mildew.

Similar Species: QIS larkspur

Postharvest Recommendations: Kept well in cooler; Longer vase life when cut at only 25% open.

Lisianthus

Lisianthus ‘ABC 1-3 Green’ (Ball)

Good Qualities: Nice color (3); Earlier than most other lisianthus (3); Good stem length (2); Productive.

Problems: Poor germination (3); Short stems (3).

Similar Species: None.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Dried out in plug tray; Nice green color that blends well with ‘Little Lamb’ hydrangea; Looks good for flower and stem qualities.

Lisianthus ‘ABC 1-3 Misty Blue’ (Ball)

Good Qualities: Beautiful delicate color (3); Early bloomer (3); Uniform stem length (2); Productive in field and tunnel; Unique.

Problems: Short stems (2); Poor germination.

Similar Species: None.



‘Mariachi Carmine’

Postharvest Recommendations: Use postharvest products.

Additional Comments: Dried out in plug trays; Looks good for flower and stem qualities.

Lisianthus ‘Arena III Red’ (Takii)

Good Qualities: Interesting deep red color (3); Long stems.

Problems: 30 days later than standards; Low yield; More than 50% rosetting in field; Short stems, small flowers.

Similar Species: None.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Semi-double flowers; Very late but good flower color.

Lisianthus ‘Arena IV White’ (Takii)

Good Qualities: Long stems (2); Large double white flowers; Bloomed earlier than our fall-planted Mariachis.

Problems: Too late; Most plants rosetted in field and tunnel; Low germination of this non-pelleted seed; Although they bloomed earlier than our fall-planted Mariachis, they were about 10 to 12 inches shorter.

Similar Species: None.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Large, double flowers; Not good, late to flower and shows rosetting.

Lisianthus ‘Excalibur Pure White’ (Sakata)

Good Qualities: Big blooms (3); Tall stems (2); Productive; Great vase life.

Problems: Did not germinate well; Only about half of plants had white flowers, rest were green.

Similar Species: ‘Piccolo 2 Pure White’.

Postharvest Recommendations: Floralife and cool water; Put in shade after cutting.

Additional Comments: Smaller flowers and plants than ‘Excalibur Yellow’; Looks good.

Lisianthus ‘Excalibur Yellow’ (Sakata)

Good Qualities: Strong, long stems (3); Good yellow color (2); Prolific flowers.

Problems: Poor germination (2); Yellow was more of an ivory color.

Similar Species: ‘Mariachi Yellow Improved’ (2).

Postharvest Recommendations: Floralife and cool water; Put in shade after cutting.

Additional Comments: One of the tallest lisianthus we grew; Nice pale yellow flowers with green centers and yellow stamens; Not good, flimsy/weak stem quality.

Lisianthus ‘Mariachi Carmine’ (Sakata)

Good Qualities: Unique color (5); Strong stems (2); Productive.

Problems: Short stems (3); Petal color fades (2); Poor germination from seed; 8 to 10 inches shorter than those grown from fall-started plugs last year.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: None.

Lisianthus ‘Mariachi Pink Picotee’ (Sakata)

Good Qualities: Gorgeous flower color (4); Nice stem length (2); Large blooms.

Problems: Poor germination (3); Short, floppy stems (2); Half of plants in field trial rosetted.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: Large double flowers; Worth trying again, but rosetting a worry; Not good for overall quality.

Lisianthus ‘Mariachi Yellow Improved’ (Sakata)

Good Qualities: Large, double flowers (3); Long stems (2).

Problems: Stems too short (3).

Similar Species: Flowers look like ‘Excalibur Yellow’ with green centers and yellow stamens.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: Much shorter than other Mariachis; Overall quality looks good.

Cornell comments on tunnel production:

Seeded on February 10, 2010 into 288 flats. Covered with plastic wrap and placed in postharvest cooler until Feb 27, 2010 when moved to mist 6 sec/30 min. June 17, 2010: transplanted lisianthus to 72 plug in greenhouse. Transplanted to High tunnel 1 (south side) on July 9, 2010. First flowering of ‘Echo Purple White’ on week of August 23, 2010 (approx. 45 days from planting; 194 days from seeding; 177 days from removed from cooler to mist bench). First flowering of ‘Mariachi Yellow’ on week of August 30, 2010. All stems short (less than 12 inches) due to lack of cold treatment, and very hot weather after transplanting to the high tunnels.

Lisianthus ‘Picolo 2 Pure White’ (Sakata)

Good Qualities: Pure white; Lots of buds on tall stems.

Problems: Too short to harvest; Foliage hides the flowers; Buds were at such varying heights on the stem that it was awkward to use in bouquets or arrangements.

Similar Species: ‘Twinkle White’.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: Flowers were smaller than most lisianthus.

Lisianthus ‘Piccolo 2 Purple’ (Sakata)

Good Qualities: Beautiful deep purple color (4); Good form (2); Lots of buds on each stem.

Problems: Short stems (3); Poor germination; Thrips damage easier to see on dark flowers.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: Small single flowers (2); Looks okay/average.

*I swore off marigolds a few years ago,
but ‘American Babuda Deep Gold’
made me reconsider.*

Lisianthus ‘Rosita 2 Jade’ (Sakata)

Good Qualities: Long, strong stems (2); High bud count (2); Gorgeous rich jade-green petals.

Problems: Poor germination.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: Yellow-green color; Early blooming; Smaller flower; Looks good.

Lisianthus ‘Rosita 2 Purple’ (Sakata)

Good Qualities: Gorgeous deep purple color (3) and form; Loads of buds per stem; Customers loved it.

Problems: Poor germination; Thrips damage easily seen; Color began to fade on the flowers that opened first before all the other buds opened; Small bloom size; Short stems.

Similar Species: None.

Postharvest Recommendations: Floralife and cool water; Cut when partially open.

Additional Comments: Double flowers (2); Later to bloom than ‘Rosita Jade’; A lot of petals; Bigger and more open flowers than other cultivars; Not very good.

Lisianthus ‘Vulcan II Deep Purple’ (Takii)

Good Qualities: Long stems (2); Popular color; Attractive form.

Problems: Moderate productivity in tunnel; small single flowers; 2 weeks later than standards.

Similar Species: None.

Postharvest Recommendations: Use postharvest products.

Additional Comments: Semi-double flowers with a very deep, purple color; Looks good; Loved the intense purple.

Marigold

Marigold ‘American Babuda Deep Gold’ (Gloeckner)

Good Qualities: Good deep golden yellow color (2); strong stems (2); lots of blooms, large flower heads; Less smelly than some; Nice yield.

Problems: Hard to ignore the stinky foliage (2); Short stem length (2); Susceptible to leafhoppers in field which nearly eliminated production; Customers aren’t used to

marigolds as cuts; Foliage susceptible to fungus; Stems often could not support the large flowers; Looked nice as a bedding plant; Hard to cut – stems were thick and branched, customers did not seem interested in marigolds as a cut flower, bloomed very late in the season (Zone 5).

Similar Species: ‘Gold Coin Orange’.

Postharvest Recommendations: Chrysal CVBN; Use post-harvest products.

Additional Comments: I swore off marigolds a few years ago, but this one made me reconsider; Crew disliked the strong fragrance; Marigolds are not really known as a cut flower; Florists did not purchase; Disbudded first flower to create spray look; Japanese beetles liked yellow marigolds more than gold; Would not grow again.

Marigold ‘American Babuda Yellow’ (Gloeckner)

Good Qualities: Long stem length (4); Large, bright, yellow flowers (2); Nice color; Less smelly than some; Daylight neutral; Tolerated very humid weather well.

Problems: Stems often could not support the large flowers; Stinky foliage; Susceptible to insect attack in field (leafhopper and Japanese beetle); Looked nice as a bedding plant; Hard to cut – stems were thick and branched, too short, customers did not seem interested in marigolds as a cut flower, bloomed very late in the season (Zone 5).

Similar Species: ‘American Bali Yellow’ and ‘American Narai Yellow’.

Postharvest Recommendations: Use postharvest products; Chrysal CVBN

Additional Comments: Stems began to root in vase after about four days; ‘Babuda Yellow’ was not as nice as ‘Babuda Deep Gold’ (blooms were smaller, stems shorter); Selling was a love/hate affair; Would not grow again.

Marigold ‘American Bali Yellow’ (Gloeckner)

Good Qualities: Attractive large double flower (2); bright yellow with green center (2); Long vase life.

Problems: Too short (5) for cut flowers; Would be a good bedding plant (2); Strong fragrance; Hard to cut – stems were thick and branched, customers did not seem interested in marigolds as a cut flower, bloomed very late in the season (Zone 5).

Similar Species: ‘Babuda Yellow’, Gold Coin series, ‘American Bali Yellow’ and ‘American Narai Yellow’.

Postharvest Recommendations: Chrysal CVBN; Use postharvest products.

Additional Comments: Strong fragrance; Makes an attractive hedge-type bedding plant; Disbudded first flower to create spray look; Selling was a love/hate affair; Flowers don’t get as brown as fast as the other marigolds tested; Stems quickly began to root in the vase water; All the marigolds need to be netted; Would not grow again.

Marigold ‘American Narai Yellow’ (Gloeckner)

Good Qualities: Productive, even in the field; earliest variety in trial: 80 days from sowing in tunnel; 67 days in field; Grew tallest, Great color (almost peachy); Uniform stem length; A long-day marigold.

Problems: Stems too short for cut flowers (2); Color paler than preferred; Strong fragrance; Stems often could not support the large flower heads; Attracted more Japanese beetles than other marigolds; Customer interest in marigolds is very irregular; Looked nice as a bedding plant; Hard to cut – stems were thick and branched, customers did not seem interested in marigolds as a cut flower, bloomed very late in the season (Zone 5)

Similar Species: ‘American Bali Yellow’ and ‘American Babuda Yellow’.

Postharvest Recommendations: Chrysal CVBN.

Additional Comments: Strong fragrance; Selling was a love/hate affair; Stems quickly



‘American Bali Yellow’

began to root in the vase water; All of the marigolds need to be netted; Would not grow again.

Marigold ‘American Pagoda Yellow’ (Gloeckner)

Good Qualities: Bright yellow, quality blooms (2); Grew tallest of varieties trialed.

Problems: Plants were nice, but too short for a cut flower (3); More suited to use as a bedding plant; Strong fragrance; Liked this variety much better than ‘Crackerjack’; Medium late: 88 days from sowing in tunnel; 78 days in field.

Similar Species: ‘Moonstruck Yellow’.

Postharvest Recommendations: Chrysal CVBN.

Additional Comments: Strong fragrance; Bigger and less ruffled petals than other marigolds; Had to remove lots of buds to get good stem length; Stems quickly began to root in the vase water. All of the marigolds need to be netted; Selling was a love/hate affair; Would not grow again.

Matthiola

Matthiola ‘Katz Apricot’ (Ball)

Good Qualities: Fresh peach color (5); Strong, tall stem (3), Fragrant (3); Earliest of series; About 63% double flowers; Good stem length in greenhouse.

Problems: Color not appealing to many customers; Too short; Serious problems this year with tarnished plant bug which ruined buds and blossoms.

Similar Species: ‘Vivas’.

Postharvest Recommendations: Remove some foliage; Sleeving may cause browning of petals.

Additional Comments: I loved this one!; Well liked by customers.

Matthiola ‘Katz Bright Rose’ (Ball)

Good Qualities: Good color (5); Fragrant; Doubles were very fully double and percentage of doubles was good; Nice stem length in greenhouse.

Problems: Stem moderately susceptible to bending after transplanting in high tunnel; Only 42% of plants with double flowers; A lot of singles, was difficult for us to select for doubles.

Similar Species: ‘Vivas’, ‘Anytime Rose’.

Postharvest Recommendations: Sleeving may cause browning of petals. Additional Comments: Seed sown in greenhouse, transplanted to high tunnel April 14; Well liked by customers.

Matthiola ‘Katz Lavender Blue’ (Ball)

Good Qualities: Great color (5); Tall, strong stems (2); Almost looked like a bicolor at times; Slightly darker than ‘Vivas Blue’; Fragrant; Good stem length in greenhouse.

Problems: If harvested as first florets open, stems are weak and will not be erect in vase (2); Poor germination in comparison with other colors in the Katz series; A lot of singles, was difficult for us to select for doubles.

Similar Species: ‘Vivas Blue’ (2).

Postharvest Recommendations: For maximum stem strength, harvest when most florets are open.

Additional Comments: Prefer this cultivar to ‘Vivas Blue’ (taller, stronger stem, darker color); Sown March 1 in greenhouse, transplanted to high tunnel April 14; Well liked by customers.

Molucella

Molucella ‘Country Bells’ (Genesis)

Good Qualities: Good seedling vigor (2); Popular with customers (2); Good stem rigidity and little leaf calyx brown spot; Defined bells and very good color. Spiny bracts were not as spiny as other bells of Ireland (this is a big plus); Looks good, long stems.

Problems: Weak, short stems that droop in the vase (3), Didn’t seem as strong as regular bells of Ireland cultivar; Thorns (2); Flowers bleached readily in the field; Low germination (even with soaking and chilling); Need to be covered to germinate; Need to be netted or flowers will bend; Tedious to remove the leaves from the stems.

Similar Species: Does not seem markedly different from the standard unnamed variety or ‘Antique Apple Green’ (3).



'Fama Deep Blue Improved'

Postharvest Recommendations: Does not like being cut in the heat (3); Strip the leaves off the stem to expose flower; Floralife and cool water.

Additional Comments: Similar to traditional bells of Ireland except shorter with fewer branching stems; more resistant to fungus than other varieties; Short, but worked great in small bouquets; Almost 100% germination by first sowing them in a 288 tray under lights (to give them warm, moist conditions) for three days and then putting them in the cooler (dark, cold moist conditions) for two weeks. Then, back under lights to grow on.

Scabiosa

Scabiosa 'Fama Deep Blue' (Binairy)

Good Qualities: Nice, moderately deep lavender color (4); Strong stems (3); Semi-double flowers; Decent production for a first-year blooming perennial in a hot summer; Large, showy flowers that continued to open once picked; Easy to grow, low energy input.

Problems: Poor germination; Not enough production; 3 of 8 plants died just before bloom; Insects; Slow to flower, too long of a crop time, branches on top - reducing the stem length; Petals turn brown fairly quickly, not sure when to pick.

Similar Species: 'Fama Deep Blue Improved' (2).

Postharvest Recommendations: Harvest at the first sign of a flower forming, put in flower food for hard water and let them open inside. If left outside to open, bugs spoiled them right away; Tended to wilt.

Additional Comments: Crop failure; Did not bloom the first year.

Scabiosa 'Fama Deep Blue Improved' (Binairy)

Good Qualities: Large, showy flowers that continue to open once picked; Deep blue in high demand for bridal bouquets; Slightly darker than 'Fama Deep Blue' and some pink in the center; 'Improved' had more petals, giving the flowers the appearance of more substance.; Strong stems (3); Good color, easy to grow, low energy input.

Problems: Poor germination; Insects; 2 of 8 plants died just before bloom; Slow to flower, too long of a crop time, branches on top, reducing the stem length; Petals turn brown fairly quickly, not sure when to pick.

Similar Species: 'Fama Deep Blue' (2), maybe slightly darker than 'Fama Deep Blue'. Postharvest Recommendations: Harvest at the first sign of a flower forming, put in flower food for hard water and let them open inside. If left outside to open, bugs spoiled them right away; Tended to wilt.

Additional Comments: Produced lots of blooms even in the first year; Did not flower the first year; Crop failure.

Scabiosa 'Fama White' (Binairy)

Good Qualities: Gorgeous, almost-double, pure white color (4); Large flowers for a scabiosa; Easy to grow from seed (2); Strong, long stems (2); Low energy input.

Problems: Poor germination (2); Petals turned browned earlier than other cultivars (2); Quickly went past harvesting prime due to the interest of the bees (2); Low yield; Secondary stems tend to be shorter than the first flowers; Slow to flower, too long of a crop time, branches on top, reducing the stem length; Petals turn brown fairly quickly, not sure when to pick.

Similar Species: 'Perfecta White' (2), didn't see much difference.

Postharvest Recommendations: Cut early in the day; Tended to wilt; Floralife and cool water.

Additional Comments: Did not flower the first year; Prefer 'Perfecta White' over 'Fama White'.

Scabiosa 'Perfecta White' (Binairy)

Good Qualities: Strong and long stems (2); 'Perfecta' has a double row of petals making the white seem brighter than 'Fama White'; Floral designers preferred 'Perfecta' for wedding arrangements; Lasted 4 days longer than 'Fama White'; Easy to grow, low energy input, good color.

Problems: Secondary stems tend to be shorter; Low yield; Short stems; Color did not stay pure white for long, quickly grayed; Slow to flower, too long of a crop time, branches on top, reducing the stem length. Perfecta is slightly less preferred than Fama's; Petals turn brown fairly quickly, not sure when to pick.

Postharvest Recommendations: Floralife and cool water.

Similar Species: 'Fama White' (2), didn't see much difference.

Additional Comments: Crop failure; Did not flower the first year.

Sea Oats

Sea Oats 'Green Oat' (Genesis)

Good Qualities: Long vase life (3); Very nice filler; Harvestable 156 days from sowing; Blooms blended well in most mixed bouquets; Tolerated hot and humid climate; Ease of cultivation.

Problems: Poor germination (3); Cutting tedious; Netting needed.

Similar Species: None.

Postharvest Recommendations: None.

Additional Comments: Died due to lack of water; Need help with germination methods; Plants in full sun struggled and put off very few, short stems; Plants in shade did great and kept putting out stems for about 2 weeks longer; Although the flowers were great, this plant is very weedy looking. Many grasses we grow are useful as foliage, but this isn't one of them.



'Green Oat'

Setaria

Setaria 'Red Jewel' (Gloeckner)

Good Qualities: Fast grower (3); Very productive (2); Good color (2); Long lasting; Strong, long stems with a good seed head; Good spike quality, ease of cultivation; nice filler.

Problems: Some genetic variability in color: although most plants had a very distinct purple tinge to the foliage and seed head, a number of plants were just green; Stems too short; Would use 'Highlander' instead; Short harvest period requiring multiple plantings; Thin stems and small head so difficult to sell in bunches.

Similar Species: 'Limelight' millet.

Postharvest Recommendations: Used fresh flower food.

Additional Comments: Died due to lack of water; Did not rebloom after large, initial flush.

Snapdragon

Snapdragon 'Calima Pure White'

(Sakata)

Good Qualities: Beautiful, straight, long, strong stems (2); Large flower head, Productive.

Problems: The pure white was not as productive as the yellow; Weak, short stems.

Postharvest Recommendations: Floralife and cool water.

Additional Comments: Heavy wind and rain caused a more horizontal growth; Need to give them more space.

Snapdragon 'Calima Yellow'

(Sakata)

Good Qualities: Bright, clear color (3); Strong stems (2); Full and productive.

Problems: Poor germination.

Similar Species: 'Chantilly Yellow'.

Postharvest Recommendations: Floralife and cool water.

Additional Comments: Heavy wind and rain caused a horizontal growth; Should have netted them earlier.

Snapdragon 'Chantilly Yellow' (Takii)

Good Qualities: Bright, cheerful, not-neon yellow (4); Strong stems (3); Early bloomer (3); Did well in both greenhouse and tunnel. Problems: Short, weak stems (3); Low germination.

Similar Species: 'Calima Yellow'.

Postharvest Recommendations: Floralife and cool water.

Additional Comments: Will try again with a fall planting (2); Did get additional secondary stems, but the primary spike was the best.

Sunflower

Sunflower 'Summer Breeze' (Takii)

Good Qualities: Cheery, bright yellow color with a green center (3); Double row of petals, some of them irregular as if being blown by a summer breeze. Strong, uniform stems; Good vase life.

Problems: Too tall (2); Stink bugs, corn rootworm beetle.

Similar Species: 'Sunrich Gold', 'ProCut Yellow'.

Postharvest Recommendations: Chrysal Pro 1; Use chlorine tablets and tell customer to change the vase water every day; Cut when petals just starting to unfurl.

Additional Comments: Holds better than other yellows; Petals less susceptible to insect damage; Huge flower heads; Very top heavy in the vase.



Cornell comments on tunnel production:

Transplanted on May 6 to high tunnel 2 ('Superior Gold'), 5 ('ProCut Lemon Lite'), or 6 ('Summer Breeze'). Hand-watered in after transplanting and drip irrigated 6 X 6 inch spacing. 'ProCut Lemon Lite' was first harvested June 23 (63 days after transplanting) with plants greater than 72 inches. 'Superior Gold' and 'Summer Breeze' were 8-10 feet tall when harvested and the first harvest for both cultivars was July 2 (71 days after transplanting) with the last harvest July 17. In a late summer planting direct seeded in the field on July 22, 'Summer Breeze' was about 4 days later than 'Superior Gold' (49 days after planting for 'Superior Gold', 53 for 'Summer Breeze'). Plant heights were about 6 feet. Large difference in postharvest life depending on how open the flower: a flower that was all the way open

started to lose petals and leaves began to turn brown in only 2 day; a flower only partially open looked as good as when it was cut for much longer.

Zinnia

Zinnia 'Benary's Giant Lime'

(Benary)

Good Qualities: Very popular lime green color (4) with much improved size from previous seed releases; Strong and long stems; Does not need support netting; Long vase life.

Problems: Shorter than the other Benary Giants (2); Odd color: not really lime, ranges from a minty green to a yellow green to a very pale yellow; 'Benary Lime' is much better accepted; Flowers browned out easily; Bacterial leaf spot; Powdery mildew; Not all flowers were doubles.

Similar Species: Needs to be improved to match the size and vigor of the other Benary Giants.

Postharvest Recommendations: Floralife and cool water; Cut flowers when full open; Do not add any bleach.

Additional Comments: Will continue to try to grow lime zinnias for their popularity with customers; Stem length varied.

Zinnia 'Queen Red Lime'

(Benary)

Good Qualities: Unique, old-fashioned-looking color (6); Most flowers fully double (2); Grew well from direct seeding; Did not need floral netting; Continuous bloom from early August (early June seeding) until frost; Long-lasting.

Problems: Mildew; Color turns "muddy" very quickly in postharvest (2); Some heads were on small side (2); Stem length OK, but much shorter than Benary Giants; Unpredictable vase life; Lots of variability in the color and form; Typical mildew susceptibility; Did not catch many people's eyes.

Similar Species: 'Queen Lime'; Smaller than 'Benary Giant Lime', but higher petal count.

Postharvest Recommendations: Chrysal CVBN; OVB upon harvest then Floralife Hard Water Food; Do not add any bleach because they are very sensitive

Additional Comments: Very dry year kept stem length short; Liked this color enough to put up with vase life; Would like to try this again for the fall market; Looks good with 'Benary's Giant Lime' since the center petals are almost the same lime color; Probably would not grow again.

2010 ASCFG NATIONAL Perennial and Woody Trials

John Dole, North Carolina State University
Judy Laushman, ASCFG

Penstemon is a genus that flirts with stardom. It includes some of the most spectacular wildflowers in North America with eye-popping reds, true blues, and rich purples. Unfortunately, most species are quite prone to root rot. Thus, while many penstemons flower profusely on rocky hillsides, they fade away when brought into cultivation. However, several breeders have been working on the genus and Dale Lindgren of University of Nebraska has produced some wonderfully durable penstemons. One of these, *Penstemon 'Dark Towers'* (Terra Nova) scored very well in the trials due to its high productivity – cut flower growers harvested an average of 17.5 stems per plant with one trialer noting a harvest of “20 to 30 on first harvest”. Stem length ranged from 12 to 36 inches, quite a spread in length. Typically the first stems harvested were quite long. Each stem had a cluster of light pink flowers nicely highlighted by the dark bronzy red foliage. Plants were quite durable as none of the plants died during the winter in Zones 5, 5b, 7 and 8b. Not many problems were noted by cut flower grower other than a short flowering period and sticky stems (be careful of where you place the bunches).

Heuchera have been in the cut flower trials in the past and several have scored quite well. This year, ‘Paris’ (Terra Nova) was exceptionally productive, with an average of 36 stems per plant, which were 6 to 18.5 inches long. ‘Paris’ produced long stems with dozens of small coral-rose flowers, which make great fillers. One grower noted that plants flowered “all summer after big flush in the spring” and that “flowers lasted a long time on the plant - at least two weeks for each stem before the individual flowers would fade.”

Monarda 'Raspberry Wine' (Gro ‘N’ Sell) was one of our personal favorites for its rich color, unique shape, high productivity and long stems. Last year it scored so well that it was nominated for Fresh Cut Flower of the Year and this year it performed equally well. Plants produce an average of 15 stems each, although we got 26 harvestable stems per plant here at NCSU. Stem length ranged from 15 to 26.5 inches long.

This was the first year in the trials for *Rudbeckia 'Henry Eilers'* (Terra Nova), but all the plants flowered, producing an average of 12 stems per plant. Stems lengths averaged a respectable 23 inches long, with at least one person getting 36-inch long stems. Respondents listed



‘Samba’



‘Flame Thrower’



‘Green Eyes’



‘Rose Honey’



‘Cotton Candy’



‘Paladin’

many positive qualities, from the “long, strong stems” to the “architectural quality to the flowers”. No problems were listed, except one person who said “they are still blooming in mid November, enough already.” Needless to say, ‘Henry Eilers’ scored well and was nominated for Fresh Cut Flower of the Year. According to one trialer, ‘Henry Eilers’ was “the most successful of the 10 perennials that I trialed this year”.

In the woody trials we are testing several of the beautiful shrub roses from Kordes. While we will be tracking these for several years, ‘Toscana Freelander’ is doing quite well so far, according to the trialers. It has large bright red flowers on strong stems. In addition to the comments and data, at NCSU we rated each of the cultivars according to fragrance, the incidence of black spot, defoliation and thorns. ‘Perfumed Passion’ had the strongest fragrance, closely followed by ‘Mon Petit Chou’ and ‘Sweet Antique’. ‘Party Dress’ and ‘Antique Caramel’ had some fragrance, while the rest had limited fragrance. The worst for black spot were ‘Toscana’ and ‘Antique Caramel’. The cultivars with the least black spot were ‘Mon Petit Chou’, ‘Corrie Freelander’, ‘Party Dress’, and ‘Perfumed Passion’. Of these, all but ‘Corrie Freelander’, held most of their foliage by the end of the summer. However, ‘Samba’, ‘Toscana’ and some of the ‘Corrie Freelander’ plants had lost much of their foliage. Thorniness varied quite a bit from the very thorny ‘Samba’ and moderately thorny ‘Honey Freelander’ to the almost thornless ‘Corrie Freelander’. ‘Perfumed Passion’ and ‘Antique Caramel’ also had relatively few thorns.

The past couple years we have discussed the surge of stunning new *Echinacea* hybrids. These spectacular plants come in a variety of colors from white, pink and purple – the traditional colors – to yellows, oranges and all shades in between. Regardless, several cultivars planted this year scored quite well. Of these, ‘Green Eyes’ (Terra Nova) received the highest scores. Plants produced an average of 4.5 stems that were 7 to 18 inches long. Cut flower growers loved the vibrant pink color with the green centers. This cultivar was good enough for one person to write “in my opinion, most echinaceas are not great cut flowers. However, two of this group - ‘Green Eyes’ and ‘Fragrant Angel’ - have made me reconsider. They are both beautiful cuts.”

In their second year ‘Merlot’ and ‘Purity’ (Terra Nova) did quite well. ‘Merlot’ produced an average of five and a half stems per plant and the stems were 11 to 18 inches long. We loved the rich rosy purple petals and dark purple stems. ‘Purity’ produced an average of 11 stems/plant, which were 10 to 15.5 inches long and sported bright white petals.

We feel it is important, unfortunately, to mention again that growers in the center of the U.S. will have a difficult time growing coneflowers for more than a year or two due to aster yellows phytoplasm (AYP). As Laurie Hodges pointed out, this leafhopper-transmitted disease is especially prevalent in the central states. There have also been a number of reports of hybrid echinaceas “melting away” after prolonged flowering.

Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year competition. Rankings are based on the combined ratings score: market appreciation + repeat again + ease of cultivation for those cultivars where more than three trialers responded. Thus, from the 2010 trials *Heuchera* ‘Paris’, *Monarda* ‘Raspberry Wine’, *Penstemon* ‘Dark Towers’, *Rudbeckia* ‘Henry Eilers’, and *Rosa* ‘Toscana Freelander’ are nominated as Cut Flowers of the Year and will join nominations from the seed trials and from ASCFG members.



‘Henry Eilers’

Interpreting the trial results: The numbers reported are averages of all the respondents. 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. For example, with annual asters some people harvest the entire plant as one bunch while others harvest each individual flowering branch, giving very different stem lengths and yield data. 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 species sounds interesting but did not appear to do well, try it anyway. The cultivar may work well for you.

Acknowledgments: All cut flower growers should thank the perennial and woody plant producers for providing the plant materials and the growers for producing the plants, collecting data and submitting trial reports. The growers paid for shipping expenses and agreed to provide data for at least two years. Plants were donated by perennial producers and shipped as the perennial plugs or dormant roots directly to the trialers. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials, Brigitte Crawford, Erin Regan, Diane Mays, Michelle McElhannon, Brad Holland, and Tim Ketchie for assisting with the NCSU trials, and Caroline Richardson for laboriously condensing the comments and data. In preparing the report we have edited the participant’s comments for space and clarity; my apologies if we’ve altered the tone or content of anyone’s comments. Thanks to everyone for making this service of ASCFG possible.

Trial Results for Year 2 of Perennial Cultivars Planted in 2009. First row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed in the range line, either only one person responded for that category or several responded and all gave the same rating.

Species	Cultivar	Plants died over winter (%)	Plants flowering (%)	Yield stems/plant ^a	Stem length (inches) ^a	Market appreciation rating ^a	Repeat again rating ^a	Ease of cultivation rating ^a
Agastache	'Cotton Candy'	40.0	87.5	10.5	15.3	4.0	2.5	3.0
Terra Nova		20-60	75-100	3-18	14-16.5	1-4	1-4	2-4
Agastache	'Summer Sky'	30.0	87.5	4.0	14.5	4.0	2.5	3.0
Terra Nova		0-60	75-100	3-5	14-15	1-4	1-4	2-4
Echinacea	'Mac n' Cheese'	30.0	87.5	3.0	11.8	4.0	2.0	3.0
Terra Nova		0-60	75-100	3-5	11-12.5	1-4	1-3	2-4
Echinacea	'Merlot'	32.5	100	5.5	14.8	4.0	3.5	3.5
Terra Nova		25-40	100	2-9	11-18.5	1-4	3-4	3-4
Echinacea	'Purity'	5.0	100	11.0	12.8	4.0	3.0	3.0
Terra Nova		0-10	100	2-20	10-15.5	1-4	2-4	2-4
Echinacea	'Tiki Torch'	20.0	100	5.0	13.7	3.0	3.0	3.7
Terra Nova		0-40	100	3-7	11-15	1-4	1-4	2-5
Echinacea	'Tomato Soup'	34.0	100	10.0	15.0	4.0	2.5	3.0
Terra Nova		28-40	100	3-17	11-19	1-4	1-4	2-4
Hellebore	'Double Queen Mix'	20.0	100	0.0	6.5	2.0	4.0	3.0
Gro'n'Sell		0-40	100	-	6-7	0-2	1-4	2-4
Heuchera	'Paris'	4.0	100	35.5	14.2	4.5	4.7	4.5
Terra Nova		0-12	100	30-41	12-18.5	4-5	4-5	4-5
Heuchera	'Velvet Night'	0	-	17.5	21.0	4.0	4.0	4.0
Terra Nova		-	-	-	-	-	-	-
Monarda	'Raspberry Wine'	0	100	14.8	21.0	4.2	4.0	4.4
Gro'n'Sell		-	100	3-26	18-26.5	3-5	2-5	4-5
Penstemon	'Dark Towers'	16.7	100	17.5	20.5	4.25	4.5	4.5
Terra Nova		0-50	100	10-25	18-24	4-5	4-5	4-5

^aData shown are from those respondents who harvested stems. Some respondents may not have harvested stems because they were too short. Flowering stems may be longer next year after plants are established. See comments section for more details.

^b1 to 5 scale, with 5 being the best.

Participating Perennial Suppliers	Participating Perennial Growers
Gro 'n' Sell 320 Lower State Road Chalfont, PA 18914 (215) 822-1276 (215) 997-1770 (fax www.gro-n-sell.com	Cynthia Alexander Bloomlust Frisco, TX
Terra Nova Nurseries 10051 S. Macksburg Road Canby, OR 97013 (800) 215-9450 (503)263-3150 www.terranovalnurseries.com	Janet Bachmann Riverbend Gardens Fayetteville, AR
	Christof Bernau UCSC Farm & Garden Santa Cruz, CA
	Maureen Charde High Meadow Flower Farm Warwick, NY
	Josie Crowson Josie's Fresh Flowers Nacogdoches, TX
	John Dole North Carolina State University Raleigh, NC
	Thea Folls Foll's Flower Farm Auburn, NY
	Laurie Hodges Dept. Agronomy and Horticulture Lincoln, NE
	Ingram McCall North Carolina State University Raleigh, NC
	Jamie Rohda Dept. Agronomy and Horticulture Lincoln, NE
	Joan Thorndike La Mera Gardens Ashland, OR

2010 Perennial Cut Trials - Year 1

Species	Cultivar	Plants received alive (%)	Plants flowering (%)	Yield stems/plant ^a	Stem length (inches) ^a	Market appreciation rating ^a	Repeat again rating ^a	Ease of cultivation rating ^a
Echinacea	'Firebird'	98.0	95.0	2.5	12.2	3.3	3.0	3.8
Terra Nova		90-100	75-100	1-4	10-16	2-4	1-4	3-5
Echinacea	'Flame Thrower'	97.0	95.0	3.3	11.8	3.8	3.6	3.6
Terra Nova		90-100	75-100	1-6	9-18	3-5	1-5	1-5
Echinacea	'Fragrant Angel'	100.0	98.0	5.3	12.3	3.5	3.8	4.0
Terra Nova		100	90-100	3-10	9-16	3-4	2-5	3-5
Echinacea	'Green Eyes'	100.0	100.0	4.5	11.2	4.2	4.2	4.2
Terra Nova		100	100	1.5-8	7-18	3-5	3-5	4-5
Echinacea	'Maui Sunshine'	98.0	95.0	4.6	14.2	4.0	3.8	3.8
Terra Nova		90-100	75-100	1-7	8-24	3-5	1-5	1-5
Echinacea	'Pink Poodle'	96.0	96.0	2.9	11.5	3.3	3.0	3.6
Terra Nova		80-100	80-100	1-6	8-18	2-3	2-4	1-5
Echinacea	'Tangerine Dream'	97.0	95.0	2.4	11.0	3.8	3.6	3.6
Terra Nova		90-100	75-100	1-4	7-16	3-5	1-5	1-5
Eucomis	'Oakhurst'	100.0	0.0	0.0	0.0	3.0	3.0	4.0
Terra Nova		100	-	-	-	2-4	2-4	1-4
Leucanthemum	'Paladin'	99.0	92.0	7.5	11.4	3.5	2.6	4.0
Terra Nova		95-100	60-100	5-11	5-18	3-4	1-4	3-5
Rudbeckia	'Henry Eilers'	100.0	100	11.8	23.20	4.6	4.8	4.6
Terra Nova		100	100	7-18	16-36	4-5	4-5	4-5

^aData shown are from those respondents who harvested stems. Some respondents may not have harvested stems because they were too short. Flowering stems may be longer next year after plants are established. See comments section for more details.

^a1 to 5 scale, with 5 being the best.

2010 Woody Cut Trials - Year 1

Species	Cultivar	Plants flowering (%)	Yield stems/plant ^a	Stem length (inches) ^a	Market appreciation rating ^a	Repeat again rating ^a	Ease of cultivation rating ^a
Rosa	'Antique Carmel'	100	7.5	11.0	3.5	3.0	3.0
Kordes/Newflora		100	5-10	8-14	3-4	2-4	2-4
Rosa	'Corrie Freelander'	62.5	5.0	15.0	2.5	3.0	3.0
Kordes/Newflora		25-100	2-8	12-18	2-3	3.0	3.0
Rosa	'Honey Freelander'	100	12.5	15.0	4.5	4.5	4.0
Kordes/Newflora		100	10-15	12-18	4-5	4-5	4.0
Rosa	'Mon Petit Chou'	100	8.0	13.0	3.5	4.0	3.0
Kordes/Newflora		100	7-9	10-16	3-4	4.0	2-4
Rosa	'Party Dress'	62.5	4.5	12.5	3.0	3.5	2.0
Kordes/Newflora		25-100	3-6	10-15	2-4	3-4	2.0
Rosa	'Toscana Freelander'	87.5	9.0	19.0	4.0	4.5	3.5
Kordes/Newflora		75-100	8-10	18-20	2-5	4-5	3-4

^aData shown are from those respondents who harvested stems. Some respondents may not have harvested stems because they were too short. Flowering stems may be longer next year after plants are established. See comments section for more details.

^a1 to 5 scale, with 5 being the best.

Participating Woody Suppliers

Kordes Roses from Newflora LLC

972 Old Stage Rd., Central Point, Oregon 97502
(541) 941-4378
www.newflora.com

Schulte's Greenhouse and Nursery

(Willow - no data yet)
2960 LaBeaux Ave. St. Michael, MN 55376
(763) 497-3747
www.schultesgreenhouse.com

Summary of Comments

The number in 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.

2010 Perennial Cut Flower Trial Cultivar List - Year 1

Echinacea 'Firebird' (Terra Nova)

Good Qualities: Nice color (3); Strong stems.

Problems: Many died; Stem too short; Petals droop after a few days in water.

Insects or Diseases: Lost about 40% of these plants to gophers; Some insect damage on petals.

Postharvest Recommendations: Plain water.

Additional Comments: Short (3); few usable stems (3); Not particularly attractive; Would not grow any of them again; Not particularly unique within the range of cultivars; Nice color; Nice fragrance; Apparent hardiness; Looking forward to seeing how they do in year two.

Echinacea 'Flame Thrower' (Terra Nova)

Good Qualities: Vibrant color (3); Very dark pink ray flowers; Good stem length and rigidity; Long bloom season.

Problems: Stems too short; Many died.

Insects or Diseases: Insect chewing on petals.

Postharvest Recommendations: Plain water.

Additional Comments: Rather short; Few usable stems; Not particularly attractive; Would not grow any of them again; Nice color; Nice fragrance; Apparent hardiness; Looking forward to seeing how they do in year two.

Echinacea 'Fragrant Angel' (Terra Nova)

Good Qualities: Nice big white bloom with green center (3); Non-drooping petals (2); Fragrance.

Problems: Short stems (2); As with many white flowers, after a few days the white color looks shabby - in this case the petals had a green tinge.

Insects or Diseases: Insect damage on some petals; Leaves of some plants look like they might have a virus.

Postharvest Recommendations: Plain water.

Additional Comments: Nice color; Nice fragrance; Apparent hardiness; Looking forward to seeing how they do in year two.

Echinacea 'Green Eyes' (Terra Nova)

Good Qualities: Gorgeous bright pink with green centers (4); Very prolific; Non-drooping petals; Fragrant; Long bloom season.

Problems: Short (3); Not very many stems per plant.

Insects or Diseases: Gophers liked them - we lost 50% of the plants by late season; Insect damage to some petals.

Postharvest Recommendations: Plain water.

Additional Comments: 'Green Eyes' and 'Flame Thrower' began to bloom later and had more blossom buds at frost than the others; In my opinion, most echinaceas are not great cut flowers. However 'Green Eyes' and 'Fragrant Angel' have made me reconsider, they are both beautiful cuts; Nice color; Nice fragrance; Apparent hardiness; Looking forward to seeing how they do in year two, All echinaceas bloomed here from early to mid August until frost (Zone 6/7)



'Maui Sunshine'



'Pink Poodle'

Echinacea 'Maui Sunshine'

(Terra Nova)

Good Qualities: Nice yellow color (5); Very interesting flowers; Customers really liked the yellow ray flowers and the "petals" were broader, thus more showy, than *Echinacea paradoxa*. Ray flowers also were held relatively straight outward, unlike *E. paradoxa*; Wonderful fragrance; Tall stems.

Problems: Many died; Some insect damage.

Insects or Diseases: Insect chewing on petals made some flowers useless for sale.

Postharvest Recommendations: Plain water.

Additional Comments: Rather short; Few usable stems; Not particularly attractive; Would not grow any of them again; Had a hard time interesting florists in *Echinacea* as a group. But they did like the long stems of this cultivar; Nice color; Nice fragrance; Apparent hardiness; Looking forward to seeing how they do in year two.

Echinacea 'Pink Poodle'

(Terra Nova)

Good Qualities: Beautiful, very double bloom (3); Most cones entirely covered with petals; Petals remained flat for the seven days in water.

Problems: Most died and those that lived had very short stems; Flowers too fussy and didn't seem to hold up after harvest.

Insects or Diseases: Insect chewing on some petals.

Postharvest Recommendations: Plain water.

Echinacea 'Tangerine Dream'

(Terra Nova)

Good Qualities: Nice deep orange color (3); Lots of attention from customers; Petals remained flat the full seven days; The cone didn't continue to develop. Once the cone protrudes the petals droop making the flower less desirable to some florists; Hoping for longer stems next year.

Problems: Many died; Few flowers per plant.

Insects or Diseases: Gophers enjoyed them - we lost about 30%; Some insect chewing.

Similar Species: 'Tiki Torch'

Postharvest Recommendations: Plain water.

Additional Comments: Rather short (2); Few usable stems; Not particularly attractive; Would not grow any of them again; Used all the echinaceas (except 'Pink Poodle') with various colors of yarrow in bouquets.

Eucomis 'Oakhurst' (Terra Nova)

Good Qualities: Nice bronze foliage.

Problems: Ten percent died; Maybe it will flower next year, if it survives zone 5 conditions.

Additional Comments: Did not flower this year (3).

Leucanthemum 'Paladin' (Terra Nova)

Good Qualities: Very floriferous for a first year plant (3); Very nice bright white color and semi double, frilly nature; Long postharvest life; About 75% are still alive.

Problems: Short plants and stems (3); Small flowers, very short stems (2); Hard to use and pick; Seem top heavy and stems often twisted; Don't like the look of the double petals.

Postharvest Recommendations: Plain water.

Additional Comments: Will see what these same plants do next year, but won't plant more - prefer single petal type of *Leucanthemum*.

Rudbeckia 'Henry Eilers' (Terra Nova)

Good Qualities: Long vase life (3), strong stems, grew tall (2) and stood up without floral netting; Unique petals (2); Withstood August heat and drought, Customers loved it (2), Easy to use in arrangements.

Postharvest Recommendations: Chrysal Pro. #2, but plain water also seemed to be fine.

Additional Comments: Very popular with florists; The most successful of the 10 perennials that I trialed this year.

2010 Perennial Cut Flower Trial Cultivar List - Year 2

Agastache 'Cotton Candy' (Terra Nova)

Good Qualities: Nice color.

Problems: Scrawny plants, Weak stems, Poor postharvest life.

Additional Comments: No more agastache!

Agastache 'Summer Sky' (Terra Nova)

Good Qualities: Nice color.

Problems: Scrawny plants, Weak stems, Poor postharvest life.

Additional Comments: No more agastache!

Echinacea 'Mac n Cheese' (Terra Nova)

Good Qualities: Nice color; Non-droopy petals; Strong stems.

Problems: Very few stems per plant this year; Too short; Bloom quality is inconsistent.

Insects or Diseases: Fungus problems.

Echinacea 'Merlot' (Terra Nova)

Good Qualities: Great color (2); Good stem length (2); Non-droopy petals; Large bloom.

Problems: A bit taller than last year, but still short; Bloom quality inconsistent.

Postharvest Recommendations: See NCSU postharvest article in this issue for more information.

Echinacea 'Purity' (Terra Nova)

Good Qualities: Bright, white color; Non-drooping petals; Nice size bloom.

Problems: Most stems were much too short.

Postharvest Recommendations: See NCSU postharvest article in this issue for more information.

Echinacea 'Tiki Torch' (Terra Nova)

Good Qualities: Vibrant orange red (2); Good flower size; Non-droopy petals; Strong stems.

Problems: Came back well from the winter, but all plants died over the summer; Too short; Bloom quality is inconsistent; Did not produce as many stems as several other cultivars.

Insects or Diseases: Fungus problems; The western pocket gopher seemed to find 'Tiki Torch' the tastiest of all of the trial varieties, thus we lost about 60% of the plants by late season.

Additional Comments: Perhaps 'Tiki Torch's' lack of productivity was due to root grazing by the gophers. To prevent any additional losses, I am going to dig and pot them for the winter, so I will get a chance to look at their roots, or lack thereof.

Echinacea 'Tomato Soup' (Terra Nova)

Good Qualities: Nice color; Non-droopy petals; Strong stems.

Problems: Came back well from the winter, but all plants died over the summer; Too short; Bloom quality is inconsistent.

Insects or Diseases: Fungus problems.

Postharvest Recommendations: See NCSU postharvest article in this issue for more information.

Helleborus 'Double Queen Mix'

(Gro 'n' Sell)

Good Qualities: Soft colors; Early spring bloom time.

Problems: Stems were not long enough for use and not abundant; Plants seem to be thriving; Hoping in year 3 they produce more.

Insects or Diseases: Rabbits nibble off leaves until none are left. Someone needs to inform them that they are toxic! Apparently hellebores like partial shade, not full shade under a *Cornus mas* and tree peony. Those on the outside where they get morning sun are doing better so far. Also, 6 plants were devoured by voles.

Additional Comments: Doesn't like hot summer climate (2); Lovely double flowers; Potential for respectable stem length for florist work; Planning to move some plants to more light this fall and hope for more stems/plant in 2011.

Heuchera 'Paris' (Terra Nova)

Good Qualities: Beautiful, coral-rose color; Bright clear red; Very prolific bloomer; Great addition to bouquets; Blooming all summer after big flush in the spring; In late spring some plants had exceptionally tall flowering stems; Flowers lasted a long time on the plant - at least two weeks for each stem before the individual flowers would fade.

Problems: About 40 % of plants died this summer, rather suddenly; Stems much longer than in Year 1, but still rather short.

Additional Comments: Planted in partial shade in compost-amended heavy clay. This cultivar is fantastic as I have never seen *Heuchera* blooming through the summer! The border edging display in the spring

resulted in several comments from neighbors, "What is that?!" I think this will be a winner for the landscape. For cut flowers, the stem has a lot of flowers on it compared to some older cultivars and the plant has the potential for 18-24" stems. I will fertilize in early March 2011 to see if the stem lengths can be pushed on more of the plants.

Monarda 'Raspberry Wine' (Gro 'N' Sell)

Good Qualities: Beautiful color; Interesting bloom; Long, strong stems; Comes into bloom around the 4th of July, and flower shape fits right into that holiday.

Problems: About half of the plants died rather suddenly this summer. Those that survived did not bloom as much or as long as they did last year—maybe a weather-related problem; Worked well in farmers market bouquets; Very little interest from florists.

Penstemon 'Dark Towers' (Terra Nova)

Good Qualities: Great, dark maroon foliage color (2); good stem length; Strong stems; Seems to handle the heat well; Good number of flowers per stem; Florists used in table arrangements for wedding and in boutonnieres; One plant produced 30 stems with stem length 30-36+ inches on the first cutting.

Problems: Short bloom period; Usual problem with sticky stems; Despite hot summer and limited water, they performed well.

Insects or Diseases: A few aphids.

Postharvest Recommendations: Plain water worked fine; Flowers lasted a month in the cooler with no adverse effect on vase life; If stored in the cooler the flowers turned a darker color but were still beautiful. See NCSU postharvest article in this issue for more information.

Cornell comments on tunnel production: Planted in very well-drained, amended clay soil in high tunnel in June 2009 at 12 x 12-inch spacing. Each plant now at least 18 inches in diameter. Harvest started about two weeks after inflorescence buds were seen. Harvested May 25, 2010. Aphids on certain plants as of April. Sprayed with *Beauveria* twice prior to first harvest. One spittle bug found on stem. Netting is not necessary.

2010 Woody Cut Flower Trial Cultivar List - Year 1

Rose 'Antique Caramel'

Good Qualities: Gorgeous flower; Mellow buff color; Light scent; Good vase life; Full petal count; Good repeat bloom in fall.

Problems: Not vigorous; Few blooms the first spring; Japanese beetles love the flowers.

Insects or Diseases: Japanese beetles; Black spot; Grasshopper damage.
Additional Comments: Love the flower but the plants are too weak.

Rose 'Corrie Freelander'

Good Qualities: A nice rose, but not outstanding in any way.

Problems: Dark pink color bleached in hot sun.

Postharvest Recommendations: Floralife for hard water; Vase life was at least a week.

Additional Comments: 'Toscana Freelander' and 'Corrie Freelander' are very strong and vigorous. Flowers during the summer were small.

Rose 'Honey Freelander'

Good Qualities: Fragrant; High apricot center with honey outer petals; High petal count; Lovely peachy buds.

Insects or Diseases: Japanese beetles; Grasshopper damage.



Postharvest Recommendations: Floralife for hard water.

Additional Comments: Best flower producers with a beautiful rich color; Flowers could be cut before opening; Leathery foliage; Plants started out and remained smaller and weaker than the other cultivars. Flowers during the summer were small.

Rose 'Mon Petit Chou'

Good Qualities: Huge beautiful flowers that really are cabbage roses; Large, loose, deep pink bloom 5 head; Medium high petal count.

Problems: Cannot be harvested closed or even less than half-open which is a problem with rain and beetles; Minor black spot.

Insects or Diseases: Japanese beetles.

Postharvest Recommendations: It needed to be shaken to remove moisture.

Additional Comments: Best for dry climates or under cover.

Rose 'Party Dress'

Good Qualities: Huge, many petals (2) and gorgeous; If harvested dry it was incredible; Long lasting; Fragrant.

Problems: Heavy dew or rain had a negative effect, once wet, blooms would rot; Could not be picked in bud or it would not open; Short stems.

Insects or Diseases: Rot from moisture.

Similar Species: It shared the same problems with 'Mon Petite Chou'.

Postharvest Recommendations: Floralife for hard water; Shake water out of head when harvesting; Vase life was at least a week.

Additional Comments: Best grown under cover to avoid the water in the buds issues.

Rose 'Toscana Freelander'

Good Qualities: Most brilliant red rose color I have ever seen; Vigorous; Disease free; A great first year rose; Healthy and strong; Repeats well in the fall.

Problems: More black spot than the other varieties.

Insects or Diseases: Grasshopper damage.

Similar Species: This stands out in the category.

Postharvest Recommendations: Floralife for hard water; Vase life was at least a week.

Additional Comments: 'Toscana Freelander' and 'Corrie Freelander' are very strong and vigorous. Flowers during the summer were small. Stem length on 'Toscana' was best although few stems were cut of any length due to size of plants this first year.

Postharvest Treatment of Specialty Cut Flowers

North Carolina State University Report for 2010

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This project was supported by the Association of Specialty Cut Flower Growers Research Fund, the American Floral Endowment, and numerous suppliers. The authors would like to thank Alicain Carlson, Erin Regan, Michelle McElhannon, Diane Mays and Qianni Dong for assisting with growing and harvesting the cut flowers.

Every year we conduct vase life tests on promising species and cultivars from the ASCFG Perennial, Seed, and Woody trials. We will also test other interesting cultivars we are growing for various experiments and trials. This year 34 cultivars were evaluated. The amazing production, longevity and uniqueness of some of the plants we tested really stood out.

The marigolds were quite impressive in that they started producing flowers in May, and just didn't stop! Much to the dismay of our harvesting team, there was a sea of yellow and orange to wade through every time we harvested. Of the five cultivars in the trials, three were chosen for postharvest testing: 'American Babuda Yellow', 'American Babuda Deep Gold' and 'American Narai Yellow'. Each had a unique yellow hue and all lasted an average of at least one week. Flowers lasted longest when treated with a holding solution. These cultivars differed from typical marigolds by having much longer stems which were almost always over the 12-inch minimum harvest length. We also grew different varieties for other experiments, which produced much shorter stems. See the ASCFG trial summary for more information.



'Green Oat' sea oats had a fun inflorescence that not only provided nice movement in the landscape, but also made for a great cut. What was so impressive is that the stems lasted an average of a whopping 45 days. They faded to a tan that made them great to use dried, and the plants showed remarkable bronze inflorescences in the fall. This cultivar would definitely be recommended to anyone who has a fondness of grasses as cuts.

Another unique cut was callistemon 'Woodlander's Red.' While the average vase life was just a short 5.8 days, the pink-red flowers were fun and different and would work well as a vertical, visually light addition to a flower arrangement. Leaving the dark green leaves at the base and tip of the terminal inflorescences also provided a nice contrast to the pink petals. A couple things to note: all the itty-bitty flower parts tended to fall off as the

flowers aged and the leaves were a bit prickly to handle.

Over the years we have tested many sunflower varieties. This year we tested one from the ASCFG trials and from another trial for the Fred. C. Gloeckner Company. See the ASCFG trial summary for more information. Vase life of 'ProCut Orange', 'Sunrich Orange', 'Vincent Choice' and 'Vincent Fresh' was longest when a holding solution was used. A hydration solution also increased the vase life of 'Vincent Fresh'. 'Summer Breeze', 'Sunbright Golden Yellow', 'Sunbright Supreme', and 'Sunrich Orange' cut stems were not influenced by the postharvest treatments. All cultivars lasted at least 9 days when treated with a holding solution, except for 'Vincent Fresh', which lasted close to 8 days in a holding solution, and 9.6 days when treated with a hydrator followed by a holding solution.

How We Handled the Flowers

Field-grown flowers were harvested at the optimum stage of flower development and placed into tap water (0.21 EC, 6.1 pH). Stems were then sorted into 4 equal groups and placed in the following treatments:

- Hydrator only
- Holding preservative only
- Hydrator followed by holding preservative
- De-ionized (DI)water only (control)

Floralife Hydraflor 100 was used as the hydrator at 1.0 ounce/gallon and Floralife Professional was used as the holding preservative at 1.3 ounces/gallon. After treatment, stems were placed in DI water and held at $68\pm4^{\circ}\text{F}$ under approximately 200 ftc light for 12 hrs/day. The vase life for each stem was recorded. Termination point was typically when 50% of the flower(s)/florets on the stem were brown, wilted, drooped, etc.

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 bit cooler than a typical home in the summer time. 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. These factors combined typically add about 1 to 3 days to the vase life of some species compared to what a grower would usually get.

We also listed the minimum vase life for several cultivars. We harvest and test up to 60 stems per cultivar and present the average vase life. For some cultivars most of the stems died about the same time. With others, flowers were terminated over a long period – thus the vase life of some of the stems was much shorter than the average.

And Now for the Results

Amaranthus 'Mira'

'Mira' was tough to work with. The leaves had insect damage, and the stems and inflorescences varied in size so it was hard to sort the stems and determine what cut length to use. The inflorescences tended to bend over from their own weight, and droop more as they aged. Forget using this one for any upright arrangement. A holding solution slightly extended the vase life to more than 8 days, while the average was 7.3 days.

Annual Aster 'Palette Mix'

This mix offered pink, purple, white, and red flowers. Flowers lasted a long time for all treatments, with an average vase life of 17 days. The hydrator treatment shortened their vase life, which we found interesting. However, even if the hydrator was used, the flowers still had a vase life of over two weeks.

Annual Aster 'Semi Double White'

This aster lasted an average of 20.2 days. Hydrator shorted the vase life, and the longest vase life was obtained from using DI water.

Callistemon 'Woodlander's Red'

'Woodlander's Red' had an average vase life of 5.8 days and the treatments did not affect the vase life. While the pinkish-red color was striking, a lot of flower parts tended to fall as the flowers aged. The local bee population loved this one in flower.

Celosia 'Celway Terracotta'

This celosia had spiky inflorescences that were often in clusters with stems too short for our 12-inch minimum, but we were still able to get enough long stems to test the

vase life. While the light pink blooms dried, faded, and drooped with time, they still lasted an average of 23.2 days before being terminated. As the flowers aged, they also released tiny black seeds, which could be annoying. As with 'Red Flame', the holding solution reduced longevity, so it is not recommended.

Celosia 'Red Flame'

This celosia often didn't expand into the brainy appearance that celosias often take on; many stems had the wavy flower head, but didn't have much substance to them. 'Red Flame' lasted 16.3 days on average before fading/browning or bending at the base of the inflorescence. Hydrator appeared to reduce vase life, while stems lasted the longest in DI water or with a holding solution.

Dianthus 'Volcano Mix'

'Volcano Mix' offered a range of white, pink, and red shades, often mixed in the same flower head. The flowers lasted quite a while in vases, 15.4 days, just as one would expect of a dianthus. The treatments did not make a difference.

Echinacea 'Tomato Soup'

This echinacea was the color of its name. As the flowers aged, their petals faded to the orange hue of its culinary comrade grilled cheese. The flowers lasted 11.7 days, and we recommend against the use of a hydrator.

Echinacea 'Purity'

'Purity' offers a ring of white ray florets with a center of discs that mature from green to orange. Its vase life is nothing to be ashamed of at 11.4 days. The hydrator tended to shorten the vase life, while using just a holding solution provided the longest vase life.

Echinacea 'Merlot'

We had several echinaceas in our second-year perennial trials in 2010, and we liked 'Merlot' because of its rich color (just like the wine). A holding solution is recommended, as the vase life went from around 8 days to 12 days with the addition of the holding solution.



Marigold ‘American Babuda Yellow’

The marigolds in our trials starting producing in May and did not stop until we cut down the plants.

‘American Babuda Yellow’ lasted an average of 8.4 days, and a holding solution is definitely recommended.

Marigold ‘American Babuda Deep Gold’

‘American Babuda Deep Gold’ was also a good producer and was the tallest marigold cultivar tested. It lasted an average of 11.8 days and, as for its yellow counterpart, a holding a solution is recommended.

Marigold ‘American Narai Yellow’

‘American Narai Yellow’ lasted an average of 7.1 days and a holding solution is recommended.

Lisianthus ‘ABC 1-3 Misty Blue’

We had a number of lisianthus in the trials this year and looked at vase life of three. While they did have a nice first flush of blooms, their subsequent stems were mostly too short for our 12-inch minimum for harvesting. Upon a visit to a local grower with stunning, tall lisianthus, it could be concluded that this was because of our growing conditions – lissies definitely do better in high tunnels. With the delicacy of a lissy and its soft lavender-blue flower color, ‘ABC-1-3 Misty Blue’ was a looker. While its vase life varied from a minimum of 5 to a maximum of 17 days, the average life with a holding solution treatment was 12.9 days.

Lisianthus ‘Excalibur Pure Yellow’

The designation “pure yellow” perfectly describes the flawless flower color. The vase life averaged 15.6 days. Treatment did not make a difference in vase life.

Lisianthus ‘Rosita 2 Jade’

‘Rosita 2 Jade’ has a subtle green tinge to its flower color. The green color was hard to distinguish except when compared side by side to a yellow cultivar such as ‘Excalibur Pure Yellow’. However, it had the typical long lisianthus vase life of 14.6 days. Treatment did not affect vase life.

The marigolds were quite impressive in that they started producing flowers in May, and just didn’t stop! Much to the dismay of our harvesting team, there was a sea of yellow and orange to wade through every time we harvested.

Penstemon ‘Dark Towers’

The dainty soft pink florets of ‘Dark Towers’ created a nice contrast with its purplish-green foliage. Our cuts lasted an average of 9.3 days and the treatments made no difference in vase life.

Phlox ‘Blushing Shortwood’

This perennial was in its first year of our trial, but still produced enough harvestable stems to test. They lasted an average of 11 days, and it did not matter which treatment was used.

Scabiosa ‘Fama Deep Blue’

‘Fama Deep Blue’ had an average vase life of 9.3 days and vase life ranged from 2 to 14 days.

Scabiosa ‘Fama Deep Blue Improved’

‘Deep Blue Improved’ had an average vase life of 8.6 days and a range from 2 to 13 days, similar to ‘Fama Deep Blue.’

Scabiosa ‘Fama White’

This scabiosa had an overall vase life of 9.2 days. In a holding solution, it lasted closer to 10 days. Without a holding solution its vase life was closer to 8 days.

Scabiosa ‘Perfecta White’

‘Perfecta White’ had a vase life of 8.7 days and lasted about the same length of time regardless of treatment.

Sea Oats ‘Green Oat’

The inflorescences of ‘Green Oat’ would be great for those growing grasses. The minimum vase life was 17 days and the average vase life was an impressive 45.1 days. The stems did not droop, but rather faded to a tan color. They would work well in dried designs in addition to being a great filler in fresh cut arrangements and bouquets. If you’re really going for longevity, plain water is best, as our DI water control had the longest average vase life at 52 days.

Snapdragon ‘Chantilly Yellow’

The snapdragons did not agree with our hotter-than-normal summer. After their first flush of blooms, regrowth was shorter than desired, and after that, the heat all but shut them down. The vase life of ‘Chantilly Yellow’ averaged 6.3 days, and use of a holding solution extended the average vase life by 3 to 4 days.

Snapdragon ‘Calima Pure White’

‘Calima Pure White’ had an average vase life of 7.2 days, and like ‘Chantilly Yellow,’ a holding solution extended the vase life.

Sunflower ‘Summer Breeze’

This cheery yellow sunflower had large flower heads – so large that we had to support their jars to avoid the weight of the flower tipping them over! It had a vase life of 8.6 days and the treatments did not make a difference.

Sunflower ‘Vincent Choice’

The cultivar flowered as fast as ‘ProCut Orange’ and vase life was longest, 11.1 days, when treated with a holding preservative. The hydrator had no effect.

Sunflower ‘Vincent Fresh’

Flowering at the same time as ‘Sunrich Gold’, the vase life of ‘Vincent Fresh’ was close to three days longer when both a hydrator and a holding solution (9.6 days) were used, as compared to just water (6.8 days).

Zinnia ‘Queen Red Lime’

‘Queen Red Lime’ offers dark pink disc florets, and ray florets with a variable combination of lime inside and pink outside. Some flowers were mostly pink and others were mostly lime. The flower color is unique in that it isn’t as vibrant as a lot of zinnias, so it might find a niche as a muted, down-to-earth color in arrangements. It lasted an average of 7.3 days, and a holding solution is recommended. The flowers often faded very quickly when they started to decrease in quality, rather than gradually fading/withering over the course of a few days.

The Northern IRELAND Report

David Davidson, CAFRE, Greenmount Campus, Northern Ireland,
and Ko Klaver, Zabo Plant USA

What do cut flower growers in Northern Ireland have in common with American growers?

In his quest to promote cut flower lilies to the civilized world, the ASCFG's industry liaison Ko Klaver of Zabo Plant visited Northern Ireland last October, where he joined forces with David Davidson of CAFRE, Greenmount Campus in County Antrim.

David had asked Ko to present a talk about lilies and other specialty cut flowers at a workshop for Northern Ireland growers. David is a Horticulture Development Advisor for CAFRE (College of Agriculture Food & Rural Enterprise). He's been an ASCFG member for ten years; you may remember his enthusiastic participation at the 2005 National Conference in Lancaster.

Over the last seven years, David has worked very closely with growers and farmers to develop a market for specialty cut flowers, which are purchased in Northern Ireland, the Republic of Ireland and the mainland UK. This groundswell of activity was borne of growers exploring

alternative ornamental crops as a supplement to or replacement of produce, dairy and agronomic crops. Just as in the United States, a carefully selected diversification of crops is imperative.

Flower Growers Face Similar Issues

David's horticultural extension service to the NI growers is a unique approach of identifying growers' business needs and working to fill them. This includes organizing workshops, managing cut flower trials which demonstrate new species and varieties, creating systems to improve growers' competitiveness in the marketplace, promoting sustainable practices, explaining the use of individual economic development plans, answering technical queries, and supporting Supply Chain initiatives alongside his Supply Chain Development Branch colleagues.

It quickly became clear to all who attended the workshop held at Greenmount Campus that the Northern Ireland growers are similar to ASCFG members on several levels. They deal with the same crop diversity issues, similar marketing challenges and opportunities,

and the systemization of crop production. Just as in the U.S. where we see low-priced lily bunches shipped from South and Central America, Northern Ireland has its influx of cheaper priced cut lilies coming in from mainland Europe, namely Holland.

Also similar to the United States floral industry, high quality flowers and preferred marketing strategies enable the grower to stake a claim in the local retail market. Growers who provide local, freshly-harvested flowers using a smaller carbon footprint are recognized by the consumer. This works especially when this message is carried through in the marketing strategy of the grower. Northern Ireland growers do noticeably more brand name marketing than their U.S. counterparts, by either promoting their farm name, or making sure their bunches carry a visible message that flowers are locally or regionally grown.

Ko and David traveled to County Down to a village called Rathfriland, to visit Barclay and Lesley Bell of Moorfield Flowers. The Bells diversified into flower growing from dairy and cereal farming and now grow an excellent crop of lilies in cold frames with no supplemental

lighting. The season for cutting their lilies is from June to the end of October. They also grow peonies and sunflowers in the field, and delphiniums, alstroemeria and stocks in tunnels.

Northern Ireland is about the same latitude as northern British Columbia or the Alaska Peninsula. However Northern Ireland seldom gets any snow or extreme cold because there is no real high elevation, and it is protected by the Atlantic Ocean Gulf Stream, so it has a very moderate climate with few extremes. There are exceptions, such as the bitterly cold conditions in the winter of 2009-2010.

These growers' biggest challenge is low winter light levels. It is expected that with the coming of more affordable LED supplemental lighting Northern Ireland growers can extend their crops into the fall and perhaps all the way to Christmas.

Lilies and Lettuce

Another visit was to Billy Plunkett of Plunkett's Nurseries in Newtownards, County Down, which specializes in cut flowers and bedding plants for local markets. They grow daffodils, tulips, lilies, stocks and natural season standard bloom and spray chrysanthemums.

Billy has been growing floral crops for many years, and even with minimal heat, he had an excellent crop of lilies coming on. Because of Ireland's cloudy maritime climate, humidity remains high and planting media dries out less quickly. Billy hand-waters his lilies, feeling that this method gives him better control over his crops.

The last stop was to Shane Donnelly's Greenisland Flowers near Portadown, County Armagh. Shane specializes in year-round lettuce production, and started growing cut flowers alongside the lettuce on the advice of CAFRE. He has since developed into one of the largest

stock and lily growers in Northern Ireland.

Shane grows his summer-flowering Orientals in soil beds in his Spanish tunnels and hoop houses, and rotates his lilies, stock and lettuce crops regularly. All his higher value Orientals and OT's are now grown in crates. Shane was working hard to make sure he was hitting the Christmas market with pink and white Orientals by managing his crop with heat and supplemental lighting. His crops are constantly monitored for nutrition deficiencies, in case the light is still too low.

Shane has some impressive facilities and is quite systematized in his production. This is necessary as his crops are wholesaled locally and regionally, and sold to the national supermarket chain Marks and Spencer.

Making Connections

It's apparent that growers all over the world face the same challenges, such as how to properly read local and regional markets, how to grow more sustainably or organically; considerations of year-round growing, crop and cultivar selection, maintaining the perceived product value, and defining competition. All of this while maintaining profitability!

A flower grower's competition is not other growers, but consumers' choices of disposable income. Most people spend carefully on both time and money, and will weigh all options.

These points are regularly considered at ASCFG meetings. New ideas are shared in person, and on the Bulletin Board by an international network of growers who are generous with their experiences – good and bad. The encouragement to new growers is particularly gratifying.

It's hoped that the liaisons created through these meetings and tours will continue into 2011 and beyond, and that Northern Ireland growers and ASCFG members will mutually benefit.



Modesta Valantinas, Ko Klaver, Eric Morrow, Teresa Maguire and David Davidson.



Ko Klaver, with Shane Donnelly and Stephen Baxter of Greenisland Flowers.



Two types of lily production.

During a growers' meeting at College of Agriculture, Food and Rural Enterprise, in Antrim, Northern Ireland, Horticulture Technologist Teresa Maguire demonstrated trials of lilies grown in crates using different media. The premise of the trial was to find environmentally sustainable methods of reusing peat-based lily medium and peat alternatives, while reducing costs for cut flower growers.

Look for a summary of this research in the Spring 2011 issue of *The Cut Flower Quarterly*. Until then, go to www.ruralni.gov.uk and click on 'Cut Flowers and Foliage.'

JANET'S Gems

Janet Foss

Herbaceous Clematis

In the past few years, “scrambling” or non-climbing clematis have been showing up in nurseries. These are mostly new hybrids of *Clematis integrifolia*. They are considered herbaceous plants because they are grown like perennials, and cut back to the ground in late winter or early spring. Many of them make long-lasting cut flowers of incredible blues, lavenders pinks and whites. They are much easier to grow than the elusive blue poppy (*Meconopsis*) but they will remind you slightly of that lovely flower. They also look like anemones, to which they are related, but they bloom during the summer when most anemones don’t.

Most importantly, they have a good vase life. I have had cut stems last well over a week in my house but have heard of stems lasting 2-3 weeks. Many have a long blooming season, or repeat bloom, and most have buds that open abundantly in water. As clematis, they have willowy stems which need support. Square tomato cages open on the side have worked the best for me, though some of my 4- and 5-year-old plants are getting too big for the cages, and I'll need to either divide these plants or use a different system. I am considering trying the staking system

Amy Hinkle demonstrated at Bear Creek Farms during last year's conference.

Eyes of most unholy blue!

Three clematis are my favorites for cut flowers. First is ‘Arabella’, bred by Barry Fretwell and introduced in 1990. It grows two to three feet tall in my garden and has sprays of medium blue flowers

from late spring to early fall. I should mention that the flowers are medium blue for me, but in different growing areas, shades of mauve and purple may be mixed in. Clematis petals are really sepals, so they start out green and color up as they mature. ‘Arabella’ also has creamy to yellowish stamens which spray out from the center, adding to the texture of the 2-3" flowers. It easily produces 16-20" stems for cutting, and each stem has one to six flowers. The flowers last over a week. Buds will open if harvested young (half to three-quarters open) and properly conditioned. I cut them into clean water with a holding solution, and leave



‘Arabella’

although they're a royal blue rather than blue, they are huge (4-5") and fat and perfect, and the creamy stamens are tight like a dot in the center. The stems are stronger and longer, but have only one to three blooms on a stem. It repeat blooms but will not be as reliably in flower as frequently as ‘Arabella’. The plants don't increase in size very quickly; compared to ‘Arabella’, five-year-old *x durandii* plants are one-tenth the size. Nevertheless it is a beautiful plant and cut flower.

My third favorite is ‘Inspiration’. It grows 3-4 feet for me in full sun and has beautiful dark pink (mauve) flowers with yellowish stamens. It's not as full as ‘Arabella’ and not as tight as *x durandii*. ‘Inspiration’ was introduced in 2000. I haven't had the plants as long as ‘Arabella’, and from what I've seen so far they won't be as vigorous. It does bloom repeatedly all summer; the flowers are beautiful and the color is useful. I know the flowers are long-lasting, but I can't verify reports that they last three weeks.

Clematis x durandii has prettier blooms; although they're a royal blue rather than blue, they are huge (4-5") and fat and perfect, and the creamy stamens are tight like a dot in the center.

them in the cooler until point of sale. I did notice that on some hot days at farmers' market they may wilt slightly, but revived later in the barn.

Clematis x durandii, which is no new plant, coming from breeding in 1870s, is an awesome plant that produces incredible royal blue flowers. I like ‘Arabella’ better because it's such an awesome producer, but *x durandii* has prettier blooms;

A Truly Specialty Cut Flower

All three of these herbaceous clematis are readily available, and they are all hardy between zones 4-9. They grow best in full sun, but partial shade is fine and may be preferred in warmer parts of the country. They all like to be watered regularly but not flooded or grown in a swamp. An average pH (6-7) is preferred.

It can be challenging to cut flowers because stems tend to tangle as plants mature, but all produce stems long enough for cutting. They need support such as netting or tomato cages; caging keeps the plants more useable, therefore more profitable. Pruning for all three is to cut them back to the ground, or to six inches, in late winter or early spring.

They can be propagated by layering, division and basal cuttings, although 'Inspiration' is still under patent (possibly 'Arabella' as well). Plants from a one-gallon pot will generally pay for themselves by the second year.

So far I haven't had any pest or disease problems, but I have heard clematis are prone to aphids, thrips, and spider mites. Several different fungi can cause problems. I'll keep my fingers crossed, but it seems the more you have of some plants the greater the chances you'll have problems.

It's exciting to know that there are quite a number of these beautiful types of clematis coming onto the market. I'm confident most of them will make good cut flowers for those looking for something truly special.



Janet Foss, J. Foss Garden Flowers, is a specialty cut flower grower in Chehalis, Washington, and a long-time contributor to The Cut Flower Quarterly.

Haygrove tunnels

Quietly revolutionizing horticulture

The advertisement features a large central image of a long, white, arched tunnel structure. Below this are several smaller images showing different agricultural settings: a field with plants under a white tunnel, a man kneeling in a field holding a tomato, a tree in a blue-tinted enclosure, a greenhouse interior, and a field of red flowers. In the top right corner, there is a circular logo with the text "NRCS COMPLIANT" around the top and a stylized water drop icon in the center. The bottom of the ad contains the website "haygrove.com" and phone number "1-866-HAYGROVE" along with the URL "tunnelbuzz.com".

haygrove.com | 1-866-HAYGROVE | tunnelbuzz.com

SMALL *Things Considered*

Gay Smith

What Does it Take?

Thumbing through the September/October 2010 issue of *Blooming News*, published by the Los Angeles Flower market, I noticed an article about a floral seminar held last June in Dallas. Discussing branding to a group of 100 florists, Al Meyers, of Retail Forward, said, "We segment our markets by the occasion or event which is inspiring the consumer to shop." According to Meyers, offers must include a specific ending time and an "act now/buy now" call to action to stimulate sales.

Does your signage include a specific end time and call to action? "Available Today Only!" or "Limit Two" come to mind as simple examples that nudge consumers with an act now/buy now hook. Aesthetics are important, but clever signage can stop a potential buyer mid-stride. I recall a sign in front of a flower shop which significantly improved walk-in traffic and repeat sales. The message: Stop in for a Free Flower if Today is Your Birthday. Someone else used a variation on this idea: Stop for a Free Flower if Your Name is _____.

Traditionally, two of the most important words in marketing have been "free" and "new", but what other words win sales? How about "Limited!", to stimulate a visceral "Gotta-get-it-before-it's-gone" response? Sign language is a cheap and clever way to spark interest. Humor and wackiness are important too. How thrilling is a bouquet named "Pretty in Pink"? Change it to "Gobsmacked Pink" and you'll likely get reactions. (Gobsmacked, from Irish origins, means to be dumbfounded or shocked.)

There's no denying the power of clever wording. For example, web marketers selling magazine subscriptions

found that consumers responded negatively to the word "subscription", presumably because people feel all downloads should be free. The problem was hurdled once "application" was substituted for "subscription" and sales took off. Apparently "application" doesn't have the same bruising effect on purchasing sensibilities of buyers.

of options paralyzes our decision-making process. Sales expert Leanne Hoagland-Smith, writes in *EzineArticles* that Wheeler's system works because our brains take more time to process a question when two options are given rather than one. Try it! Find your stride with Wheeler's method by polishing sales questions so they are benefit-oriented to the customer, and with few options. You're not asking "Do you want a large bouquet?", you're just saying "Large one?" when a buyer is in front of your flowers.

I realized that Elmer Wheeler is the originator of many advertising slogans, including an aphorism I heard often from my mother: "Don't sell the steak, sell the sizzle." Wheeler is also famously credited for "Say it With Flowers" and with "Your first ten words are more important than your next 10,000." How true! Marketing experts have determined we have 3-7 seconds to capture the attention of shoppers as they breeze by a floral or market display. Add Wheeler's 10 words to this equation to realize that your chance to turn a potential customer from a competitor's product to yours happens within a one-minute window.

Since January is the month of resolutions and new starts, think about spicing up your sales introduction. Infuse those first ten words with panache and make signage speak volumes. Happy 2011!



Elmer Wheeler, sales genius of the 1940s, developed a system of increasing sales by simplifying questions asked to customers. He proved that customers will agree to order a large drink 7 of 10 times if the waitress says "large one" rather than "Do you want a small or large drink?" when taking the order. The idea is simple: ask while limiting the options.

Barry Schwartz, author of *The Paradox of Choice, Why More is Less*, echoes the idea, saying that the plethora

*Gay Smith is the Technical Consulting Manager for Chrysal USA.
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GROWER Profile

Megan Bame

Regular contributor Megan Bame sends a report about the newest member of the ASCFG family.

Luke Murray Bame was born August 27, 2010, weighing in at 7 pounds, 1 ounce and measuring 20 inches long. We've been enjoying lots of his smiles, increasing laughter and the sweetest "chatter". He has a special fondness for the pig and chick that sway back and forth on the toy bar over his bouncy seat. We weren't going to have a theme in the nursery, but I guess I should have given in early and gone with a farm theme: the other toys he particularly enjoys are a little red hen and a small plush cow rattle.

He's really a happy, laid-back baby, unless he's hungry — at which point he'll let you know about it until the situation has been corrected. As for sleeping, apparently he thinks eating is more fun than sleeping. Luke has yet to get the memo that meals are optional in the wee morning hours.

Congratulations to Megan and Andy!



Armitage Award Goes to Gay Smith

Gay Smith, technical consulting manager for Chrysal USA and long-time contributor to *The Cut Flower Quarterly*, was presented the Allan M. Armitage Leadership Award at the ASCFG 2010 National Conference in Tulsa.

Gay has more than 30 years of experience in the cut flower industry. She has worked at all levels, including wholesale businesses, importers and bouquet makers. She's been with Chrysal for 10 years.



John Dole of North Carolina State University presented the award. Dole has worked with Gay on several research projects.

The Armitage Leadership Award recognizes those in the floral industry who consistently strive to foster the goals of ASCFG and the specialty cut flower industry. Besides attending and speaking at national meetings and trade shows, Gay writes for several floral trade publications and is considered one of the country's experts on cut flower postharvest handling. She is the *de facto* postharvest pro for many ASCFG members.



Gay's twin sister Joy and older sister Susan surprised Gay at the Tulsa Conference.

What if You Can't Transplant On Time?

Many important cut flower species are transplanted. When field weather conditions are awful, should you wait for better weather? If so, for how long? Or should you just pitch the plants? We answered these questions for zinnia 'Uproar Rose', lisianthus 'Echo Champagne', celosia 'Spring Green', larkspur 'Sublime Dark Blue', and godetia 'Flamenco Salmon'.

We conducted trials in 2010 in Ithaca, New York (Zone 5) to determine effects of flat size and delayed planting to the field. Treatments included: (1) Starting the seedlings in a 72-cell tray in a greenhouse, and transplanting to the field when the seedlings could be pulled (seedlings formed a root ball and could be removed from the tray without leaving seedling mix behind); (2) Similar to 1, except that seedlings were started in a 200-cell tray; (3) Seedlings started in a 200-cell tray, but transplanted to the field 2 weeks late; (4) Seedlings started in a 200-cell tray, transplanted 3 weeks late; and (5) Seedlings started in a 200-cell tray, transplanted to a 72-cell tray when treatment 1 went to the field, and not transplanted until week 5.

Since each species reacted differently to crowding and delayed transplanting, the results will be described for each, starting with the toughest and ending with the most sensitive.

Zinnia 'Uproar Rose': There was no difference in the number of stems per plant over the season among any of the treatments. Seedlings transplanted on time out of large cells formed the largest plants at flowering, but the other treatments caught up. Plants produced 9 marketable stems averaging 20 inches long. The worst treatment was #4, in which the plants had

been crowded in small cells for 3 extra weeks, but aside from a 2-week delay in flowering, and a 17% shorter stem length; stem numbers were the same (Fig. 1).

Lisianthus 'Echo Champagne': As in similar experiments run in past years, lisianthus was not seriously affected by seedling crowding and delayed transplanting. Yields ranged from 2 to 5 stems per plant, with seedlings transplanted 3 weeks late out of the 72-cell tray (#5) doing the best, and the 2-week delay treatment (#3) faring the worst. Stem lengths varied only from 14 to 16 inches.

Celosia 'Spring Green': This cockscomb variety is non-branching, producing a single fan-shaped flower when well grown (Fig. 2). All treatments retained perfect stands after transplanting, so yields were judged on the basis of comb size. Paradoxically, although plants at flowering in treatment 1 were nearly 8 times bigger than those transplanted 3 weeks late from 200-cell trays, combs were less than half the size of the latter. Weather conditions after transplanting of the earlier treatment were cold and unfavorable for comb development, whereas the later transplants went into warmer field conditions. The results indicate that this variety of celosia does not react adversely to crowding, but is sensitive to weather conditions at transplanting.

Larkspur 'Sublime Dark Blue': This species was sensitive to poor seedling growth conditions. If delayed in the transplant container, the seedlings became tall and thin, and did not survive the transplant process (Fig. 3). Only 35 and

39% of seedlings held in the 200-cell containers for 2 and 3 weeks, respectively, survived in the field until flowering. Seedlings grown in 72-cell trays and transplanted promptly had high survival rates and produced the largest plants (Fig. 3). Transplanting from small to large cells increased survival, but the plants were too small at transplanting to be productive.

Godetia 'Flamenco Salmon': Conditions in the transplant container are the key determinants of success for this species. Crowding of seedlings in a 200-cell tray made seedlings thin and spindly, and the resulting plants lacked branches and the ability to form many stems (Fig. 4). In addition, these weak, crowded plants had reduced survival at transplanting, similar to larkspur.

Conclusions: These studies demonstrate that easily transplanted species such as zinnia, lisianthus and celosia tolerated crowding in the seedling stage, and delayed transplanting. Larkspur and godetia are sensitive to crowding in the seedling stage, which inhibits their survival and further growth after transplanting. In the latter species, the negative effects of delayed transplanting were not helped by temporarily transferring plants from small to larger cells. If grown in flats, these species should be grown in large size plugs and transplanted as soon as the root ball can hold together.



Fig. 1. Zinnia 'Uproar Rose', after end of cutting period, showing no distinct differences among seedling treatments.



Fig. 3. Larkspur 'Sublime Dark Blue' 14 days before flowering, showing Treatment 3 (seedlings started in a 200-cell tray, but transplanted to the field 2 weeks late) in foreground, and Treatment 1 (seedlings started in a 72-cell tray and transplanted on time) behind it.



Fig. 2. Celosia 'Spring Green' at harvest, with leaves stripped away. The left plant was grown in a 72-cell seedling tray, transplanted 25 days after sowing. The center plant was sown and transplanted on the same dates, but out of a 200-cell tray. The right plant stayed in a 200-cell tray for an additional 2 weeks.



Fig. 4. Godetia 'Flamenco Salmon', harvested at first flowering. Growing seedlings in large cells and transplanting promptly yielded the largest plants (left). Crowding in seedling containers reduced plant size, especially if transplanting was delayed by 2 or 3 weeks.

Footnote: Many thanks to the ASCFG Research Foundation for support of this research. I am also grateful for the assistance of Andrew Hoffman and Sarah Smith in conducting this work. For more detailed results of this work, consult my research page in the website of the Cornell Dept. of Horticulture (<http://hort.cals.cornell.edu/cals/hort/research/wienresearch.cfm>).

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IPM Update

Stanton Gill

Going Systemic on Insects

Systemic insecticides offer several advantages to specialty cut flower growers over many contact pesticides. Generally, once systemic insecticides are inside plants they have less of a chance of impacting beneficial predators. Secondly, since systemics are not as susceptible to ultraviolet light degradation and breakdown by organisms on plant surfaces, they control pests longer. Lastly, and most importantly, plants treated with systemic insecticides are generally less harmful to workers and customers compared to plants receiving spray applications of contact insecticides.

These treatments may not be appropriate for all pests but will kill many sucking insects that attack specialty cut flowers; the insecticide moves up the plant via the transpiration stream, killing insects that feed within the phloem or food-conducting tissues, such as aphids, plant bugs, stink bugs and whiteflies. As an insect feeds, it withdraws a lethal dose of the insecticide and is killed.

Most systemic insecticides don't provide good spider mite control. The two-spotted spider mite (*Tetranychus urticae*) does not feed within the vascular tissue (xylem and phloem) so they don't pick up the insecticide. Spider mites feed primarily on leaf undersides within plant cells, damaging the spongy mesophyll, palisade parenchyma, and chloroplasts with their stylet-like mouthparts. One systemic miticide on the market, spiromesifen, (Forbid for outdoor use, Judo for greenhouse use), controls spider mites, broad mites and whiteflies, but some argue that it is not a "true systemic" since it is sprayed onto foliage and cannot be applied to the soil for root uptake.

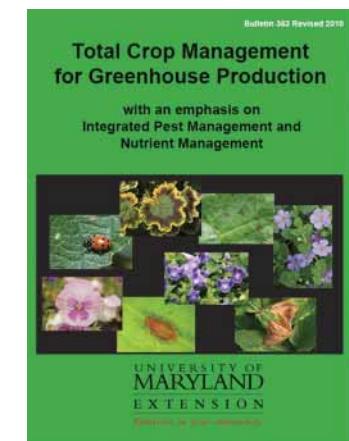
Growers have used neonicotinoids for the last fifteen years, with imidacloprid (many brand names since the patent expired) the first, followed by acetamiprid (TriStar), dinoetefuran (Safari), and thiamethoxam (Flagship). Whether it is imidacloprid or one of the other neonicotinoids, these systemic insecticides act as nicotinic acetylcholine receptor disruptors. These act on the central nervous system, causing irreversible blockage of the postsynaptic nicotinergic acetylcholine receptors. This is exciting stuff and I am sure you are thrilled to learn this information. The bottom line is they disrupt nerve transmission in insects, causing uncontrolled firing of nerves leading to insect going into convulsions, followed by paralysis and finally, death.

Since imidacloprid went off trademark, several companies jumped in, offering many generic brands of it, greatly reducing the price. End result: more thrifty cut flower growers starting using imidacloprid. Remember that if you start using one of the systemic insecticides in the neonicotinoid group, you want to rotate with another class of chemistry during the season to slow down development of resistance.

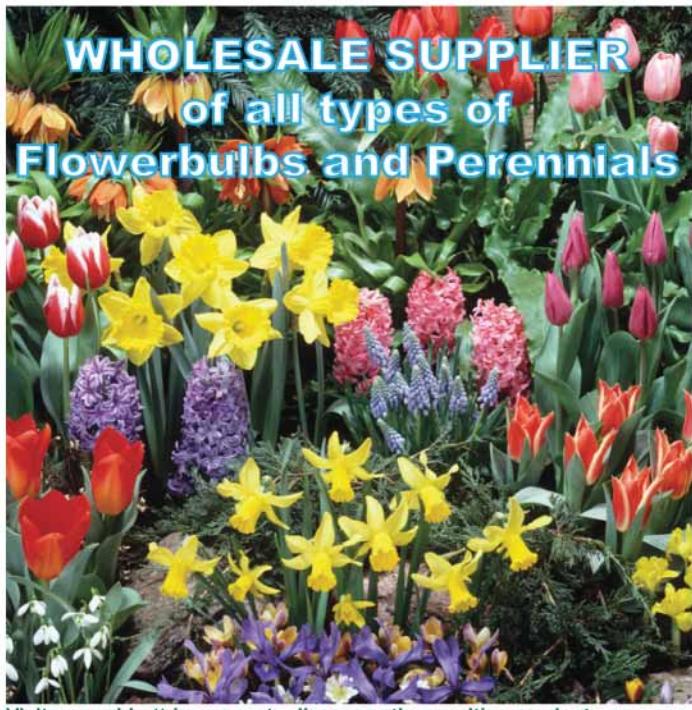
Systemic insecticides labeled for soil application will provide the longest time of insect control. However, they may take longer to be distributed throughout the plant, especially water-insoluble insecticides such as imidacloprid. Systemic insecticides applied to plant foliage work more quickly, but provide shorter residual activity. Generally, a soil application gives you the biggest bang for the longest time.

Our team at the University of Maryland Extension (Karen Rane, Andrew Ristvey, Chuck Schuster and Stanton Gill), and faculty at VPI (Joyce Latimer) and North Carolina State University Extension (Brian Whipker) have teamed up over the last two years to develop *Total Plant Management for Greenhouse Management with Emphasis on IPM and Nutrient Management*.

Karen Rane's plant pathology chapter focuses on disease control options which can be applied to cut flowers. Andrew Ristvey and Chuck Schuster provide information on fertility and water management strategies. My section covers greenhouse insect control. Print and electronic copies will be available; contact Stanton Gill at sgill@umd.edu.



Stanton Gill is Extension Specialist for the University of Maryland Extension and Professor of Landscape Technology at Montgomery College. Contact him at sgill@umd.edu



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REGIONAL Reports



NORTHEAST

Missy Bahret

Old Friends Farm

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And so it is: a brand New Year is here! Time to change habits (besides writing 2011 instead of 2010), grow in new ways, grow in the old ways (but better), and re-invent something smarter than the wheel (let me know). I like a poem by Thich Nhat Hanh that begins “Waking up this morning, I smile, Twenty four brand new hours are before me...” It is such a joy to remember this, and for the new year too: 365 brand new days are before us, each day filled with brand new hours!! What will you do with your brand new days, your brand new hours?

Here in the Northeast, snow makes the landscape look large and expansive, and that tends to be conducive to thinking in a larger perspective and re-configuring the farm plan. This year, I am concentrating on Holistic Farm Management, which I had the pleasure of intensively learning about for the year with a group of fifteen women farmers in Massachusetts.

The best way I can describe Holistic Farm Management is managing your farm and your business so that it has a healthy TRIPLE bottom-line: financially, environmentally, and socially. Using Holistic Management turns the typical “maintenance” mode of managing your farm business into an “investment or strategic” mode, thus leading to more fulfilling lifework (and wealth in a multi-faceted way).

I admit that I was struck by some of the questions at the first class and wondered when we were going to get to natural resource management and strategic business planning. At what point would I get to share how fantastic our lissies did in our new Haygrove tunnel and how we can’t seem to make sense of why we get more money for wholesale on some flowers than we do retail?

To my surprise, they asked us to: “List 3 things that excite you about farming.” and “List 3 things that replenish you when you feel depleted.”, and practically in the same breath, “What is the percentage of bare soil exposed on your land?”. Of course all of these things are important, but to actually go through these different realms with the same group of people — that was new! Even though I tend to think about these aspects when making decisions, I usually compartmentalize them and switch to whatever realm is appropriate for the given situation or person I am talking with, and tend not to merge them with equal importance.

I learn that all too often farmers lose sight of the seriousness of the holistic view, and we muddle our business decisions by looking at only money matters, or just the temporary growing plan, and lose sight of sustainability and balance of our farm and of ourselves. Our profits, our environmental impacts and our social impacts are all interconnected, and for long-term success, all three have to be valued and examined. One thing is for sure: there are plenty of exciting things to fill these brand new days and brand new hours!

Happy planning everyone! May your financial, environmental and social aspects of your farm business plan get equally valued attention this winter.

A bit about myself and Old Friends Farm: I co-own and run Old Friends Farm, a Certified Organic farm in Amherst, Massachusetts in its eighth year. My business partner Casey Steinberg and I lease 12 acres and have about 2 acres of high tunnels. In addition to cut flowers, we grow an outrageous amount of salad greens, and dabble in veggies too.

Our top wholesale flower crops are delphinium, sweet William, Canterbury bells, callas, zinnias, lisianthus, and sunflowers, and we grow many other types for retail at farmers' markets. In my spare time you may find me tracking in the woods with my husband Phillip, making felted creatures out of wool, or sword dancing (not as dangerous as it sounds).

Thanks for giving me an opportunity to be your Northeast Regional Director. I have hopes of creating some Regional Meetings that range from growing techniques to business techniques, and look forward to continuing the tradition of sharing skills grower to grower. If you have any suggestions of topics you would like to learn or share, please feel free to contact me: Missy Bahret, Old Friends Farm, PO Box 904, Amherst, MA 01004, grow@oldfriendsfarm.com (413) 253-9182

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MID-ATLANTIC

Becky Devlin

Back Bay Flower Co.
beckydevlin@cox.net

I am so excited to be your new Mid-Atlantic Regional Director! Andrea Gagnon has done such an amazing job and shared her talents generously. I (sadly) missed the epic Regional Meeting she pulled together at Longwood Gardens in 2010, but hope to be able to offer at least half as much in leadership and sharing during my term!

I am in a huge transitional stage on my farm and feel like after 9 years I finally have figured out what I want this little flower business to be. I've sold wholesale, ran a little flower stand in town for a few seasons, designed for weddings, sold at our local farmers' market, and this past season I started shipping bouquets. I've wrestled with how to run a lucrative and rewarding flower business while still being able to be a full-time mom to my four wonderful kids. When I started growing, my oldest son was four and my daughter was two. Now he's closing in on fourteen, she's eleven, and my younger two are five and three.

Feeling like I've tried it all, I made some changes for this year, to get back to actually doing what I love. Maybe it was the excessively ridiculous heat this summer, or telling my kids "not right now" for the hundredth time, but an "ah-ha" moment (along with my entire family's desire to move back to the oceanfront area of the beach) pushed me to redirect my business to focus on the things I love about it and let go of those I don't love, but felt were necessary.

So, what DON'T I love? I don't love growing huge quantities of crops and sending them out the door without getting to play with them. Initially, I got a huge amount of satisfaction from the production end of things...from seeing buckets and buckets full of beautiful blooms that I actually grew! But, like a new relationship with the wrong person, the magic wore off quickly when it wasn't a good match with everything else in my life. I have always been a closet artist of some form, always choosing art class as my elective through junior high and high school and graphic design after that. Whether it was watercolor painting or web design, I've always been thrilled by the possibilities of a blank slate.

When we bought this farm, my immediate plan was: double production and sell tons of flowers. I thought bigger was better and in the process, slowly phased out most of our bouquet making (how did I miss that our bouquets were our local niche?) and any floral design work, for lack of time and manpower. I worked seven days each week, hustling the bunches out the door. No time to even consider the slate, much less fill it with creativity. In the five years since then, I've watched my kids grow, and struggled each year with finding a balance between high production, low burnout, and actually having a life.

What DO I love? I love designing. Anything. But, I especially love designing with flowers. In the last two years, it would get down to the dog days of August and I would be just too tired after working in the sometimes 100-degree heat all week to make bouquets all day Friday for our Saturday market. I would inevitably decide to just take the flowers as-is and make some bouquets at market. Of course, the flowers would move slower and my "ah-ha" moment came when a regular market customer commented that, "It's not just your flowers people love, it's your bouquets".

So, after several years of feeling like I should fill all these fields with flowers just because - well, it's a flower farm and that's how it should be - I have realized that bigger is not better in my case. I am downsizing my farm and adding back varieties I had grown in the past because I loved them, but had stopped growing because they required a little extra care that I didn't have time to give. Our English roses have struggled for the last few years, as I did not give them as much love and care as they need to grow organically in our climate. We are now adding 10 new varieties of David Austin's, and all of our dahlias will be shaded next year and given the TLC they need to flourish in our zone 8 heat.

Weddings will be the focus of our new business, Roost Flowers & Designs, which is now being promoted as a flower farm AND floral design firm. Our farm is being moved to a 1/4 acre plot on an organic vegetable farm that is 25 minutes closer to "the city" than where I am now. Workshops and even an occasional dinner will be held in the gardens, which will also contain chickens, ducks and if I can find them, a few goats to "edge" the perimeter and give me the feeling that I'm still actually a farmer.

I will be shipping bouquets through our online shop and have created an online "CSA" that will resume in the spring.

Once I started shifting my focus toward doing what I truly love, everything has just starting flowing easily in the direction I want to go. It is amazing to me how easy things are when you let go of all the "shoulds" and "supposed tos" and follow your heart. Going into this new year, I leave you with the amaranthine wisdom of Dr. Suess, "Be who you are, and say what you feel, because those that mind don't matter and those that matter don't mind."

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SOUTHEAST

Charles Hendrick

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Greetings from sunny and warm Conway, South Carolina! We are thrilled to be writing this as Charles begins his term as the Southeast Regional Director. We live in Zone 8b in Conway which many people know as “the town you drive through to get to Myrtle Beach.” We actually live in a rural community called Cedar Grove, where we have lived all of our married life...almost 29 years. Charles was raised on the farm we live on, where his ancestors have farmed for generations. His grandfather was a tobacco farmer, back in the day when tobacco was the primary crop in South Carolina.

We never dreamed in a million years we would end up farming, but it all started when Patty read an article in our local paper about Lisa Zeigler, who began flower farming in Virginia on family land. That got us to thinking, since every year we planted zinnias with our yearly vegetables and were always amazed at what prolific bloomers they were. We decided to give it a shot and began researching, which led us to the ASCFG and the amazing world of cut flower farming! Now, neither of us have any horticulture background whatsoever. All we have endeavored up to now is through trial and error, and wisdom gleaned from other flower growers and the ASCFG.

Early on, we visited the farm of Donna and Tim Mills in Lexington, South Carolina. Donna and Tim were (and continue to be) unbelievably gracious and generous with their knowledge and advice. We also met another couple at the ASCFG conference in Orlando, Sybil and Gary Calder from Clayton, North Carolina, whose farm we also visited. They are also awesome, kind and generous folks. There is just no way we would have been able to build our cut flower business without the vital information we have obtained from friends like these in the business and many others through the ASCFG and the wonderful Bulletin Board.

We are in our 6th year of growing a total of 2 ½ acres a year. Three years ago we put up a 30x96 hoophouse, which is still a work in progress. We grow mostly annuals and a few perennials. Our crops include delphinium, sweet peas, larkspur, bachelors buttons, lilies, Karma dahlias, sunflowers, celosia, zinnias, sedum, amaranthus, star of Bethlehem and grasses. We also specialize in greenery including eucalyptus, smilax, curly

willow, and bamboo for weddings and special events. We are blessed to have an abundance of offerings from Mother Nature herself, as smilax and bamboo grow prolifically in the wild here. We sell directly to florists primarily, with the occasional retail sale. We are very fortunate to sell to florists who appreciate the unusual and do very creative flower work.

Charles farms full time. Patty works as a school psychologist in a nearby school district, but is able to farm full time when she is “off” in the summers. One of our sons is invaluable help in the summer when he is home from college. We have three grown sons, a squirrel dog named Bubba, and a Chihuahua named Peanut who adopted us.

This was the first year that we participated in the ASCFG Seed Trials. Since this issue reviews the trials, we thought we would share our top three favorites, which we definitely want to grow again.

Number 1 is the *Amaranthus caudatus* ‘Green Pearls’/‘Mira’. This bicolor hanging amaranthus mixed the best of the typical red and green. Germination was excellent, with some plants growing to as tall as six feet, which required staking. The ropes were not uniformly “bicolor”, but overall the florists loved it, and it was a top seller. We definitely want to grow this again.

Number 2 is *Setaria* ‘Red Jewel’. Germination was quite good. Strong stems and very attractive seed heads made this a big winner with the florists. Similar in looks to ‘Lime Light’ millet except with a reddish color; it was popular this fall.

Number 3 was a surprise: ‘American Pagoda Yellow’ marigold. Germination was almost 100%. This flower was long-stemmed — up to 36" — with very strong stems. The color was nice and bright. Yes, there is the marigold smell, but the smell lessened after picking. The long stem length and long vase life made this a winner. (Note:

we trialed a number of marigold varieties; some were short and not as easily saleable, but they were prolific bloomer — literally hundreds of flowers on a short row. After a rain, the flowers filled up with water, making very nice “water balloons” for a water balloon fight in the garden between Patty and son Kelly.)

As we write this, it is the beginning of December when our florist customers are starting to place their greenery orders. Later in the winter, we will have time to begin to think about a Regional Meeting for the summer of 2011. We have an idea or two we are thinking about, but would love to hear from members in our Region of what you would like to do and where! Please email us or call. We would love to hear from you!

That got us to thinking, since every year we planted zinnias with our yearly vegetables and were always amazed at what prolific bloomers they were. We decided to give it a shot and began researching, which led us to the ASCFG and the amazing world of cut flower farming!

MIDWEST



Quinton Tschetter
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The high point of our year always seems to be the National Conference. Last year's meeting in Tulsa was no exception. Our batteries, motivation, endurance and "want to" had been taxed severely, so it is great to have the kind of encouragement and education that comes with the Conference. It is always a great pick-me-up to be greeted by the smiling faces of Judy and Linda as we arrive. Then a second wave of the same kind as we rekindle friendships and acquaintances that we have made over the years. And then still another as new acquaintances are made with new members of the ASCFG and new speakers brought in for the sessions.

It is that time of year to regroup, reschedule, retool and evaluate for most of us who are seasonal growers. For the others, come along for the ride. 2010 was a challenging year for many growers, from some who had more water than they knew what to do with to those who were praying for a bit of moisture. We were reminded once more that it is better to be too dry than too wet. We can always use irrigation.

I thoroughly enjoyed the presentation by Dr. Carl Whitcomb. With his inquisitive mind and positive attitude, we were encouraged to keep trying to find more answers and to be more successful. The other speakers plus John, Lane, Laurie, Vicki, Dave, Ko, Bob and (that list could go on until all the members of the ASCFG have been listed) are endless fountains of information that we can tap whenever we need to for so many new situations that we find ourselves facing.

We included one of our employees this year. Diane is a retired schoolteacher who is helping with our design work. She found the Conference both educational and enjoyable. She was impressed with the accommodations, the programs and the friendliness of other growers. She will probably be a repeat attendee.

It seems that at every conference there is some new idea/product/resource that more than pays for the cost of the meeting. And, the exchange of ideas with other growers outside of the sessions is both educational and entertaining. I understand that this is a bit late, but I wish to personally thank Vicki and her committee for the wonderful, educational time that was the Tulsa Conference. Hopefully we will be able to employ some of the new ideas, techniques and processes in our operations for the coming year. I know that we will be sharing the stories of our successes and failures at the 2011 meeting. If you have not attended a National Conference in the past, I would encourage you to start making plans to join us in Reston, Virginia in early November where you will be entertained, encouraged and challenged.

On a side note, we have decided that raising lilies in crates has to be done in a hoophouse simply because we cannot control Mother Nature and the amount of rain nor the cool temperatures which bring on botrytis. So this fall I dismantled our two shade houses and built them into a hoophouse and a storage hoophouse so that we at least can keep the rain off of the crates. Therefore we now have eight hoophouses to protect our valuables.

Our wishes are that you have a great spring and summer.

SOUTH-CENTRAL



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Farmers' markets in the South-Central Region, just like those in the rest of the country, are facing some serious challenges to their integrity. Proclaiming themselves "locally grown," many new markets are popping up, populated by resellers alongside legitimate producers. In our Region, members have reported a supposed beekeeper who buys his "honey-like substance" from China and resells it in his own labeled bottles, and vendors selling "locally grown" pineapples and bananas at Texas markets. Here in Nacogdoches, one vendor actually touted machine-cut "baby" carrots as produce from her farm. Vendors at some markets complain that market managers turn a blind eye to these resellers, despite "locally grown" rules. But I am happy to report that our market is now dealing rather firmly with these transgressions. I thought you might find our story interesting and possibly helpful too.

The Nacogdoches Farmers' Market is located on city-owned property known to old-timers as the "hitch lot," where rural visitors once "hitched" their horses while on business in town. Long ago, a farmers' market existed here, but competition from grocery stores led to its demise. Many years later, a reseller began leasing the site from the city, and continued his business there alone until 2005 when stirrings began to build a real farmers' market. For a few years, an uneasy truce developed, with the reseller at one end of the market and a few farmers and craftspeople at the other end. In 2007, the reseller died after a long illness, and the market became a full-fledged farmers' market. By this time we had rules in place requiring that all products be locally produced, with "local" defined to include an area within 90 miles of Nacogdoches. Furthermore, anything not grown or produced by the farmer/craftsperson must be labeled with the producer's name, location and phone number.

But setting rules is one thing—enforcing them can be quite another matter. Our market manager, Sarah, is a city employee who has many other responsibilities as "Main Street Manager" for Nacogdoches. This young woman also has no farming background, making farm inspections quite a challenge for her.

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Besides, confronting a much older vendor about rule violations could be rather daunting. So for a few years, some vendors ignored the rules, reselling products that the “real” farmers knew they had not grown. The farmers complained and the manager conducted a few farm inspections. But it was easy to fool a city girl. Land was plowed, crops growing—but were these the crops the vendor was selling at the market? Hard to tell.

Last year, things began to change. Sarah had had enough and got tough. The city decided on a “three-strikes-and-you’re-out” policy. At the first offense, you get a verbal warning. Next offense, you get a written citation. Third offense, you are out for good. Some vendors got that third strike and were asked to leave the market. In addition, every farm is now being inspected, and the County Extension agent has agreed to help with these inspections. Upon hearing that inspections would be required, some vendors decided to leave the market immediately—hmm.

We vendors were happy with this progress, but some of us felt that the vendors needed a more official role in the market’s operation. We asked the city to establish a farmers’ market advisory board comprised of vendors. The city agreed and, by the time you read this, our new 5-member board will have held its first meeting. As currently envisioned, the board’s functions will include rule review, event planning, vendor review, enforcement of “locally grown,” vendor recruitment and retention, and market expansion and renovations. One big area of concern is exceptions to the “locally grown” policy. The city has approved sales of a few Texas products grown farther than 90 miles from Nacogdoches: cheese from the Texas Hill Country and citrus from the Texas Valley area, for example. Sarah has approved items which she believes truly add value to the market, but she welcomes the board’s help in making such decisions.

Sarah believes that our market is on the “right path.” I agree. It is a small but thriving market, with typically 15 to 25 vendors selling a wide variety of produce, free-range eggs, baked goods, artwork, craft items, plants, and, of course, flowers. We have weekly musical entertainment and a food caterer, and our well-attended Spring Fling and Fall Harvest Festivals feature special family activities, such as children’s yoga, face painting and art projects. The Nacogdoches Farmers’ Market has become a true community gathering place and we hope to keep it that way. Maybe the City’s tougher rule enforcement and our new advisory board will help. I’ll keep you posted.

As the seasons shift, daylength decreases, cooler temperature become the norm and our rainy season arrives in earnest, I tend to start paying much closer attention to the weather. Unlike late spring through fall when forecast discussions typically center on the intensity and duration of our daily fog regime, California winter weather is subject to constant flux, resulting from variations in the jet stream, ocean temperatures and the development of storm patterns far out over the Pacific.

On the central coast, we typically receive one of two types of winter storm, either the warm and wet storms that come out of the South Pacific, or the colder and usually less water-laden ones that arrive from the Gulf of Alaska. Between these storms we will often have several days to sometimes even a week plus with blue skies and cold, frosty nights. We pay close attention to the weather because it is these times between storms when we can get projects done outside and sometimes even in the soil if we have a long enough dry-down to work the ground without causing clodding and compaction.

Perhaps surprisingly, as our rainy season begins, I have been thinking a lot about water conservation and our responsibilities and obligations to protect and assure access to our water supply. While this is an issue particularly for ASCFG members growing west of the 100th meridian, I believe that it is increasingly an issue for people the world over.

The 100th meridian, you will recall is the north-south line bisecting North Dakota, South Dakota, Nebraska, Kansas, Texas and the western edge of the bulk of Oklahoma. It was here that in 1879 John Wesley Powell divided the country based on typical rainfall patterns. East of the 100th meridian, growers usually receive at least 20" of rainfall annually. Stillwater and Tulsa, the sites of our outstanding 2010 national conference, average approximately 36" inches of rain annually, thus reducing the absolute necessity for irrigation.

West of the 100th meridian most areas receive fewer than 20" of rain per year, thus greatly increasing the need for reliable sources of irrigation water to successfully grow the vast majority of crops. While this is clearly not an absolute point of division and many areas west of the line actually receive much more than 20" of rain, what is almost universal is that western growers will experience prolonged periods of drought each year. Where I live in the Santa Cruz Mountains, we actually get an average of 42" of rain. However, all of this rain comes between the end of October and the beginning of May, not exactly prime time for the majority of field-grown cut flowers.



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As climate patterns continue to shift and population pressures continue to grow, water conservation will increasingly become a necessity if we are to successfully meet the water demands of agriculture, industry, direct human consumption and the environment on which we all depend. In an effort to use this precious resource as wisely as possible, we will continue and expand our efforts with tried and true conservation strategies. Building soil organic matter, which diversifies soil microbiology, improves nutrient availability, soil tilth, aeration and drainage, also has the obvious effect of being a reservoir to hold soil moisture longer, thus reducing irrigation frequency.

Drip irrigation is another useful tool. Currently about 80% of our flower, fruit and vegetable crops are grown on drip. Not only does this help reduce water lost to evaporation, it is also an incredible tool in preventing the establishment and spread of many fungal diseases in the crop canopy, thus reducing the need for intervention, whether you use conventional or organic growing practices. Timing of delivery, either early or late in the day, can be another means to prevent water lost to evaporation.

We also try to encourage a measure of drought tolerance and the development of deep root systems by irrigating less and less frequently but to greater and greater depths as crops mature. This strategy is not appropriate for all crops, but for many it can have a strong impact on underground growth and our overall conservation portfolio. Augmenting plant density, within the limits of local pathogen pressures, is another simple cultural practice that can help with conservation and increase productivity per row foot, thus improving the bottom line. Finally, mulching with woodchips, straw or some similar material is a time tested way to retain moisture, indirectly build soil organic matter and protect the soil surface from the potentially erosive and soil aggregate-degrading effects of rainfall and overhead irrigation. Many mulches can also be marvelous habitat for mice, slugs, snails and earwigs, so proceed with caution.

In the context of conservation, I have also been pondering the realm of how to maintain high crop quality and yields while at the same time supplying far less water. Maybe other ASCFG growers would be interested in a collaborative research project on the subject of water conservation, crop quality and productivity. Perhaps in the future I should put together a grower grant request. Narrowing down the many variables will be key to research design, but it could be as simple as exploring different irrigation regimes for the same crops grown under otherwise identical conditions. What is the least amount of water one needs to grow the best quality crops? Even if conservation is not a primary concern for some growers, irrigation is still another input that requires time, labor, energy and infrastructure to deliver to our crops and reducing all of these costs can positively impact our financial sustainability.



NORTHWEST

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Taking stock of lessons learned and new friends in 2010, one of my favorite highlights was getting to know entomologist Beverly Gerdeman from our local Washington State University Mount Vernon Research Center. She first made contact with us after receiving funding for a WSDA cut flower specialty crop block grant. Ever the opportunists, we graciously welcomed her to visit our farm and photograph insects.



We ended up making friends in the process and seeing more deeply into the abundant insect world that our farm supports. She learned that pretty much all flower farms in the Pacific Northwest battle the same little devils: thrips and aphids. We learned more about who eats those little devils and the blur of grey between “good guy” and “bad guy” in the world of insects. Syrphid flies, also known as hoverflies, mimic the look of a bee, but have just one pair of wings and can be seen hovering around blooming flowers where, like bees, they feed on nectar and pollen, meaning that adults may also play a role in pollination. Adult females lay individual eggs on the backs of leaves where aphids are present. Syrphid fly larvae look like small, legless green worms and each one can consume as many as 400 aphids. They eat thrips, too. With as many as seven generations in one season, these are definitely good guys. I see them all over the farm and they don’t seem to favor one particular crop.

Lady beetles were first named “Bug of Our Lady” in medieval Europe where it was believed they were a divine gift for crop protection. Hmm, I wonder about that in early spring when our less-than-airtight old farmhouse is infested with hundreds of adult beetles while some hoop house crops seem out of hand with aphid problems. Then about late June, I notice veritable armies of lady beetle “dragons” and adults, especially on the dahlia crop. Last year, because we were too busy to get out there and spray with soap, I observed entire plants going from infested to clean in a matter of a few days. Literally, we wiped off the aphid exoskeletons and sold the flowers! On our farm we commonly see lady beetles attacking aphids on fennel,

a member of the carrot family, so we keep a fennel trap crop to encourage larger numbers of these divine vacuums. I have noticed adult lady beetles, along with wasps and hornets, feeding on orchard fruit in the fall, probably stocking up on sugar to make it through winter's hibernation.



Though they're not as common in the field as lady beetles, I always love seeing adult lacewings (above left), both green and brown. It took Beverly, though, to show me what a lacewing larva (above right) looks like. Like syrphid flies, adults feed on nectar, pollen and honeydew, laying eggs on plants where aphids are present. It's the larvae which are the meat eaters. Mobile and dragon-like, they devour as many as 200 aphids a week during their two- to three-week development stage. That's up to 600 aphids per individual. And, they don't just kill, they seize their prey with large, sucking jaws and inject a paralyzing venom. This critter is definitely hired!

Andy, our beloved and only full-time employee, is allergic to hornets (we've got a doozy of an emergency room story from a few years ago) so I carefully classify hornets and paper wasps as good guys. Paper wasps are usually docile to humans and prefer caterpillars, including cabbage moth. They often build their open paper nests in the eaves of our greenhouse and on the woodwork in our hoophouses. Adults feed their developing larvae a highly nutritious mixture of regurgitated caterpillar blood and nectar.

Other kinder, gentler meat-eaters include the solo-dwelling mud daubers and a number of parasitic wasps. Baldfaced hornets, on the other hand, are highly aggressive and we have to remove nests that are anywhere near high traffic areas. Fortunately, the farm is a big place with plenty of wild borders and areas so nature can strike her own balances with these highly important members of the food chain.

Dennis wrote a wonderful children's song about arachnids to the tune of "When Johnny Comes Marching Home" a few years back. Thanks to him the words "*They are a hungry carnivore, with poison fangs they're hunting for insects, worms, THEY EAT FRESH MEAT!*" are permanently stuck in my head.



The photo on the left (above) shows a beneficial crab spider ruthlessly devouring a beneficial honeybee. Shades of grey. Crab spiders do not build webs. Rather they change color to camouflage themselves on flowers (above right) and attack visiting nectar-seeking insects. They kill quite a number of pest flies and mites—and sometimes the "good guys". I'm intrigued by their ability to change color and will be keeping an eye out next year to see how many different colors they can assume.



All true bugs, Beverly informs me, have sucking mouthparts. This makes them potential pests for flower crops, like the above pictured *Lygus lineolaris*, also known as tarnished plant bug. *Lygus* aren't terribly plentiful on our farm, but heretofore, I've always thought they were eating thrips. They look like a larger version of another true bug, *Orius*, which is a highly beneficial thrips eater. According to Beverly, "Tarnished plant bug doesn't eat thrips at all. It is a pest of composite flowers (asters, mums, impatiens and marigolds) and can vector viruses with its saliva injected into the flower tissue. Flowers from damaged buds sometimes fail to develop on one side or abort. Regarding damage on your dahlias, could it be so subtle that it is not visible? Insects can be distributed in a spotty pattern even within a host plant row so it is important for flower growers to inspect their crops as often as they can." Looks like we'll be doing some more careful monitoring next year.

Since, during their adult phase, many insects feed on pollen, nectar and other sugar sources, what better place to live and reproduce than on a flower farm? Some, I have noticed, are partial to a particular flower. Half-inch long, slender orange soldier beetles, for example, hang in rampant, reproducing clusters from the Italian sunflowers (*Helianthus debilis* ssp. *cucumerifolius*), and disperse themselves around the farm to feed on aphids. Their larvae are mobile and hang out around the soil surface in leaf litter and such, feeding on insects, worms and, get this, *slugs and snails!*

Probably our best visible thrips predator is the true bug, *Orius*. They're smaller than the characters pictured above, approximately 3/32" long — bigger than a thrip and sometimes so numerous on our dahlias postharvest that they can be a problem. Beneficial or not, the bugs need to stay on the farm. To remove both *Orius* and thrips at harvest, especially on dahlias, we dip the flowers in a solution of 1 1/2 oz. Pyganic to 2 gallons of water. Dip. Let sit one minute. Dip again in plain water and dry with a gentle fan. This method was shared with us by Marc Kessler of California Organic Flowers. It works great to remove small numbers of aphids from early-season anenomes and ranunculus as well. Other flowers such as sweet peas and campanula suffer from a dipping, so always test.

Out in the field our policy is to do as little insecticide application as possible. We live with some losses and there are some crops we just can't grow, especially early in the growing season before the "good guys" are fully up and running. Occasionally we purchase and release beneficial mites and insects. However, with shipping costs, the release of live beneficials is expensive for a small and diversified operation like ours.

When we do need to spray for pest insects, we use only OMRI-certified sprays and choose carefully from that list because we do not want to disrupt balances that we barely understand. Although many variables are at play, we suspect that our sustainable growing practices combined with the diversity of crops we grow has led to increasingly rich beneficial insect populations. Each year the thrips and aphids, those little spawns of Satan, seem to be less of a problem. But hey, just one more detail from Beverly, "...there is such a thing as beneficial thrips..."

During the growing and harvest season, it can be so crazy busy that it's hard to focus on anything but taking and filling orders, and keeping the crops watered. We appreciate knowing that we have a force of unpaid labor out there helping us. Thanks, Beverly, for letting us see our world through your compound lenses.

Photos courtesy of Beverly Gerdeman, Washington State University Mount Vernon, Northwestern Washington Research and Extension Center.

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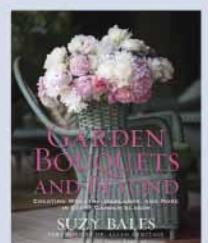
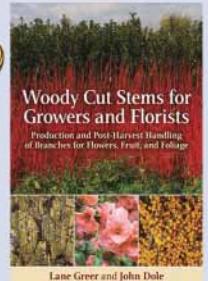
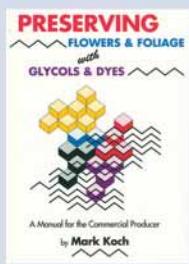
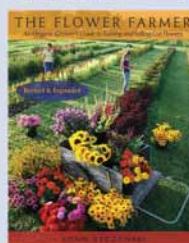
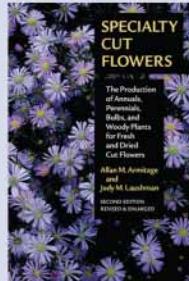


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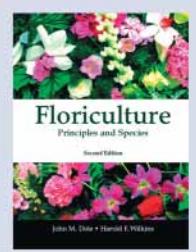
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Glynis Coleman, Deep Valley Farms, Okmulgee, OK
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It's Back . . . *Lilytopia at Longwood Gardens!*



Mark your calendars for the return of
Lilytopia, May 20–30

Inspired by the world-famous lily show at Holland's Keukenhof, Lilytopia transforms Longwood's East Conservatory into a breathtaking showcase of the newest varieties of lilies developed by Dutch hybridizers. The unique display of more than 10,000 cut stems is designed by renowned Dutch floral designer Dorien van den Berg.

Lilytopia Symposium May 23

On Monday, May 23, top professionals from both Holland and North America will once again converge on Longwood Gardens for a full-day seminar on the latest lily cultivation techniques, including pest and disease management, sustainable growing practices, and recent research findings. Last year professionals from five countries attended the Symposium to meet and network with industry professionals and trade contacts. If your business involves cut or potted lilies, we invite you to learn, grow your business, and establish key industry connections at Lilytopia 2011 at Longwood Gardens.

For more information, visit LongwoodGardens.org

ASCFG Members Honored in Tulsa

Laurie Hodges of the University of Nebraska was presented the ASCFG's Outstanding Service Award for her many years of contributions to the ASCFG. Her work on cut flowers in high tunnels has provided growers with valuable information for several years. Laurie's current emphasis is on the development and leadership for the Nebraska Farmers' Market Association. Laurie is well known to ASCFG members as a frequent attendee of and speaker at association meetings, as well as a useful contributor to the Bulletin Board, and a participant in the ASCFG Seed and Perennial Trials.



Research Grants Announced

ASCFG Grower Grant to Michelle Elston

Michelle Elston of Roots Cut Flower Farm in Carlisle, Pennsylvania, has been awarded an ASCFG Grower Grant to study the efficacy of cover crops for aisle weed suppression of field-grown cut flowers. She will use oats, summer alfalfa, white clover and a control (no treatment) to determine the best species for weed control.

With a bachelor's degree in Plant Science from Cornell, Michelle has been growing cut flowers for four years. Roots has about three acres in production and serves supermarkets, florists, a retail farmers' market, and offers wedding and special event work.



ASCFG Research Foundation Grants

Two university professors will conduct research in 2011 to benefit cut flower growers. Raymond Cloyd, an entomologist at Kansas State University in Manhattan, will study the effect of pesticide mixtures on arthropod pests of cut flowers. His focus will be on pesticide mixtures which are most effective in controlling western flower thrips, and those which are less likely to lead to resistance. The purpose is to educate producers so they avoid mistakes when mixing pesticides associated with the management of western flower thrips.



John Dole of North Carolina State University will continue his work on postharvest treatments of specialty cut flowers. The objective is to screen new cut flower species and cultivars to determine those which have a long postharvest life, and to increase the use of those in the industry. The work will indicate whether each species is suitable for wholesale marketing or only for direct retail sales.

The ASCFG Research Foundation is supported by contributions from ASCFG members.



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Erratum

An article in the Fall 2010 issue of *The Cut Flower Quarterly* titled “Red, White and I Do” was not fully cited. The complete reference should have credited the August 2010 issue of *Floral Management*. The ASCFG regrets the error.

Make Sure Your Flowers Are the Best!

The Floral Marketing Research Fund has determined that consumers value the quality of flowers more than price. “Quality” was ranked as the most important consideration, followed by color, price, design, and other factors. This project studied how flower buyers perceived advertising, price, longevity, fragrance, and appropriateness of flowers for specific occasions.

“Consumer Preference for Flowers as Gifts: Age Segments, Substitutes, and Perceived Risks” is the result of a two-year project funded by FMRF, which was conducted under the guidance of Chengyan Yue, Ph.D., at the University of Minnesota, with support from Bridget Behe, Ph.D., Michigan State University, and Charlie Hall, Ph.D., Texas A&M University.

The Floral Marketing Research Fund was established in 2008 by volunteers of the American Floral Endowment board of trustees to support consumer research that benefits the floral industry. For more information, contact the FMRF at info@floralmarketingresearchfund.org or go to www.floralmarketingresearchfund.org

THE SEATTLE WHOLESALE GROWERS MARKET

~~~~~in collaboration with Washington State University, Mount Vernon~~~~~presents

# A Specialty Cut Flower Growers School

February 18 & 19, 2011  
at

Washington State University  
Mount Vernon Northwestern Washington  
Research & Extension Center  
and Jello Mold Farm, Mount Vernon, WA  
\$125 includes lunch both days

— For more information (206) 290-3154 —

Local flower farmers **Diane Szukovathy** of *Jello Mold Farm* and **Vivian Larson** of *Everyday Flowers* are joined by third generation specialty cut flower grower **Joe Schmitt** of *Fair Field Flowers*, Madison Wisconsin to bring a dynamic learning opportunity for beginning and intermediate flower farmers in the Pacific Northwest. Focus will be on sustainable growing techniques.

This two-day workshop will offer classroom and on-farm instruction to help students begin growing and selling high quality cut flowers. Participants will receive a complete workbook with resources and technical information.

Topics covered will include:

- Business planning basics
- Plant selection
- Growing techniques
- Pest management strategies
- Specialized equipment
- Quality postharvest care
- Season extension
- Marketing opportunities



WASHINGTON STATE UNIVERSITY  
 MOUNT VERNON

Northwestern Washington Research & Extension Center

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*Wedding flowers*

*Normal bouquet*

*Mono bouquet*

*Lily-on-pot*



[www.zaboplant.nl](http://www.zaboplant.nl)



*No pollen*

*Double flower*

*Very long vase life*

