

Volume 24, Number 1 Winter 2012

# *The* **Cut Flower**

Q U A R T E R L Y

Association of Specialty Cut Flower Growers Inc.

**for growers of field and specialty greenhouse cuts**

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*Lilium Asiatic 'Antequera'*  
Cover photo provided by  
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# FROM the **PRESIDENT**

## Polly Hutchison

*Life is change. Growth is optional. Choose wisely.*

— Somerset Maugham

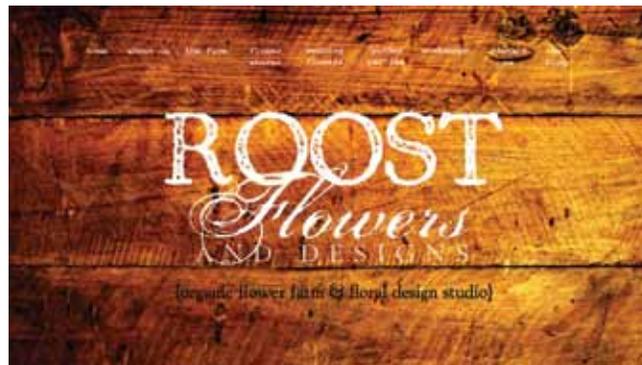
Thanks, everyone, for the honor of being your ASCFG president! A special thanks to Vicki Stambach and last year's Board for all your hard work and progress. One of the best things to come out of the past year was an exciting and fun National Conference in Reston, Virginia. Ko Klaver and Andrea Gagnon threw their considerable energy into this program and it was really inspiring.

I wasn't the only exhaust-ed farmer walking into the conference on Monday, but between the Growers' School, the energy program and the workshops and tours of the main conference we got more enthusiastic daily. This is what face-to-face meetings do; there is nothing like talking with fellow growers to build your confidence and energy. I think everyone went home with the tips and ideas to build their business further and make more profit for the hours put in.

If you couldn't go to Reston last year, do try to get to a Regional Meeting or a National Conference at least every couple of years. The ASCFG has such a great bank of knowledge, and conversations always give you more than any web posting or article. It's easy to say you're too busy, but you need to work "on" your business as well as "in" it, right?

Speaking of work, we have a lot to do in the next two years, and we are looking for members to tell us what is most important to you. The Board has had two long-term planning sessions in the last couple of years. Another terrific part of the conference was an informal brainstorming on the future of ASCFG. Judy will be sending out an email survey in the next couple of months to hear from the entire membership. Please look for that survey and take a few moments to tell us what you need from the ASCFG.

One main focus this year will be to tighten up the ASCFG's online presence for, adapting the web site to be more to the "public" and less for the membership alone. Some members are super-savvy about online media already; look to Becky Devlin (roostflowers.com) or Ellen Frost (locoflo.com) for great examples. Individual member pages within the main ASCFG site give you an easy way to have a listing, and we can help you make that happen. If you do have a web site, the member pages will increase your visibility.



Web sites for Becky Devlin (above) and Ellen Frost (below).



Here are some other great ideas that we are already working on or that we hope to implement.

- Continue to build excellent in-person programming on a regional and national level, but look for some changes in format. The Growers' School was so full, and so well-received, for example, that we hope to bring that information out again as a stand-alone workshop.
- Increase the member to member knowledge transfer through tutorials, mentoring for new growers, books on special topics, etc.
- Continue to increase the membership, and look to advertise our benefits to growers who combine food and flower growing.

As a member organization, we are only as good as you members make us. Sell the ASCFG to growers in your area—get them on board with this marvelous organization. Call the office if you think a first-time joining coupon would help sweeten the pot for that new grower. Post to the Bulletin Board, and come to your meetings. We need each and every one of you. You don't have to be on the Board to make a contribution: videos, speaking, writing, how about "hosting" a new farmer from another region for a bit? Any and all ideas are welcome! Your board will be meeting in early February, so let me know what you think.

# KING'S MUMS

## 2012 NEW VARIETIES



'Heidin's Sun'

### 'Annie Girl'

This lovely pinkish purple decorative was discovered in 1996 in a New Jersey backyard and was just recently made available for the commercial trade. Height is about 4 feet. While it can be grown either as a single stem disbud or as a spray, it is most impressive as a disbud. Each plant can be pinched to produce 5-7 single stems. Blooming time is mid-October.

### 'Don't Start'

This beautiful light pink UK import gets its name from the British exclamation, "Don't Start!". Height is about 4 feet. 'Don't Start' can be grown as a single stem disbud or spray, but again, it shows off most nicely as a single stem. Blooming time is November 1st.

### 'Encino'

Bright orange ray flowers and a yellow disk make this anemone mum an attractive cut flower or potted plant. Height is about 3 feet grown as a spray, but B-Nine will keep it to pot plant size if you'd prefer. When grown as a cut flower, pinching at the end of June will yield multiple sprays. Blooming time is mid-October.

### 'Heidin's Sun'

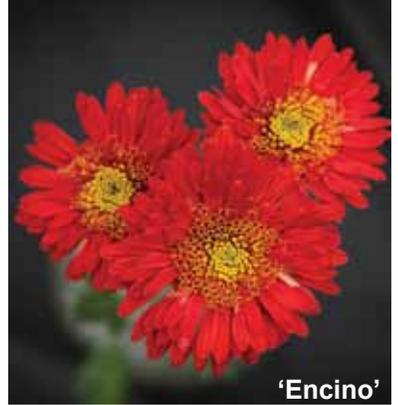
An interesting spoon developed in sunny southern California by long-time customer Ron Hedin. The blossom has bright orange rays becoming yellow near the disk. Height is about 3 feet and it is best produced as a disbud. Blooms mid-October.

### 'Jefferson Park'

This lustrous light purple incurve is named after an awe-inspiring alpine valley on the north side of Oregon's Mount Jefferson. Strong erect stems and intense color make this plant an ideal showy cut flower. Height is about 4 feet and blooming time is late October.

### 'Primrose Tennis'

A light yellow tennis ball on a stick would be an appropriate description for this early bloomer. Strong upright stems and very long-lasting blooms will make this a great cut flower for florists or farmers' markets. Height is about 4 feet. Blooming time is late September to early October.



'Encino'



'Jefferson Park'



'Primrose Tennis'



'Don't Start'



'Annie Girl'

**Hydrangea 'Everlasting™ Revolution'**  
 'Revolution' will revolutionize your hydrangea growing. Amazingly strong blooms are held on sturdy stems covered in super thick, latex-looking foliage. The flowers begin baby pink or soft blue and fade to magical color combinations of deep pink, maroon and true blue, adding green highlights as they age over a long period of time. This is the one of the most attractive hydrangeas ever! Pair 'Revolution' with lavender or white roses for a magical bridal bouquet. Each plant will produce up to 12 blooming stems the second year.



**Hydrangea 'Everlasting™ Amethyst'**  
 'Everlasting Amethyst' has incredibly sturdy, long-lasting blooms held high on thick, upright stems that begin fuchsia-pink or violet-blue, depending on the acidity of the soil. They age to a reddish pink with lime green markings and last for weeks in a vase, finishing with their final color, lime green, a new favorite of many brides. Pair this gem-colored bloom with dark pinks, white, lime greens and purple for stunning combinations. Each plant will produce up to 12 blooming stems the second year.



**Hydrangea 'Everlasting™ Ocean'**

'Everlasting Ocean' is the perfect flower to give to someone who has just welcomed a brand new baby girl into his or her life. Long-lasting, super tough, baby pink, cup-shaped flowers with ruffled edges give the appearance of a bundle of pink umbrellas tied in a bow. The blooms are held high atop sturdy green branches, and as they age, the flowers settle into a darker shade of pink and creamy white, and finally settling into lime green with dark pink edges. Each plant will produce up to 12 blooming stems the second year.



**Hypericum 'Everlasting™ Indian Fall'**

Indian Fall is covered in huge clusters of tightly formed fruit making a stunning display in any arrangement. Indian Fall has fruits the color of a fine cognac in a warmed sipping glass. Pair this new variety with yellow or red roses or blue hydrangeas for a show-stopping combination. Each stem produces 10-12 clusters of fruit and provides long-lasting color in any fresh flower display.

**Hypericum 'Everlasting™ Pink Fall'**

'Pink Fall' has huge clusters of tightly formed pink fruits. The long-lasting berries are a soft, feminine pink and go well with any summer, fall or holiday arrangement. This is the perfect color to pair with white and pink roses for a stunning bridal bouquet. Each stem produces 10-12 clusters of fruit.



**Hypericum 'Everlasting™ White Fall'**

'White Fall' is the quintessential bridal component. Versatile and easily paired with pinks, purples, white, blues and reds, this new selection will surely please even the most discerning customer. Huge clusters of long-lasting berries make this an easy addition to any arrangement. Each stem produces 10-12 clusters of fruit.



# ZABO PLANT

## 2012 NEW VARIETIES

'Ronaldo'



### Oriental Hybrid 'Ronaldo'

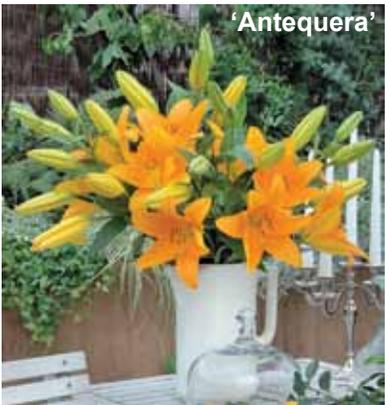
This is a high-volume producer lily that has nicely-shaped leaves, and large, up-facing flower buds. The stem is very sturdy and not too tall which make this variety very good for winter forcing. 'Ronaldo' is a very nice deep pink to red flower. It is worth your trying as it has come through the tests in Holland with high grades.

### Asiatic Hybrid 'Antequera'

Talk about new and unique: this is by far the deepest yellow-gold of any of the Asiatics and LA hybrids. It is a must-try as 'Antequera' is not just another yellow lily. Several ASCFG members trialed it in 2011 and came back with rave reviews. It has excellent bud count and produces plenty of flowers in the smaller sizes, and it handles the summer heat.

### Asiatic Hybrid 'Tebaldi'

This extremely reliable orange variety also came out of the breeding stable of Vletter den Haan. This seedling was selected about 4-5 years ago as the next best orange hybrid lily. The flower color is very similar to 'Tresor' but plants have a much better bud count and finish faster (80 days). It has very good flower bud presentation, great overall balance with flower buds which color up orange before opening. Nice dark and glossy foliage.



'Antequera'



'Tebaldi'



'Longwood'

### LA-Hybrid 'Longwood'

We have been awaiting a good cut flower 'Tango' type variety. When first seeing this variety in the breeder's greenhouse we immediately made arrangements to bring it in house as an exclusive Zabo Plant thoroughbred. It was named 'Longwood' in tribute to the relationship that the Dutch breeder Vletter den Haan has with Longwood Gardens. With strong stems, large flowers and good bud count we see this as a staple in your production plan.

### Oriental Hybrid 'Pico'

This very nice deep pink, almost red, Oriental lily has great growing characteristics. Many of you might remember this variety from the 2010 Regional Meeting at Longwood Gardens. The flower has a nice cup shape which stays nice and dainty looking. 'Pico' turns a little darker when maturing, but it is an attractive flower for sure. It scored in the top three in the choice awards.



### OT Hybrid 'Candy Club'

'Candy Club' is one special bicolor OT that holds its colors well. It has a perfect shape bloom of any lily out there. The bud count is good but they are a bit more side facing. 'Candy Club' could be your replacement of that 'Stargazer' type variety that your customers are asking for. This is a semi-exclusive variety for Zabo Plant.

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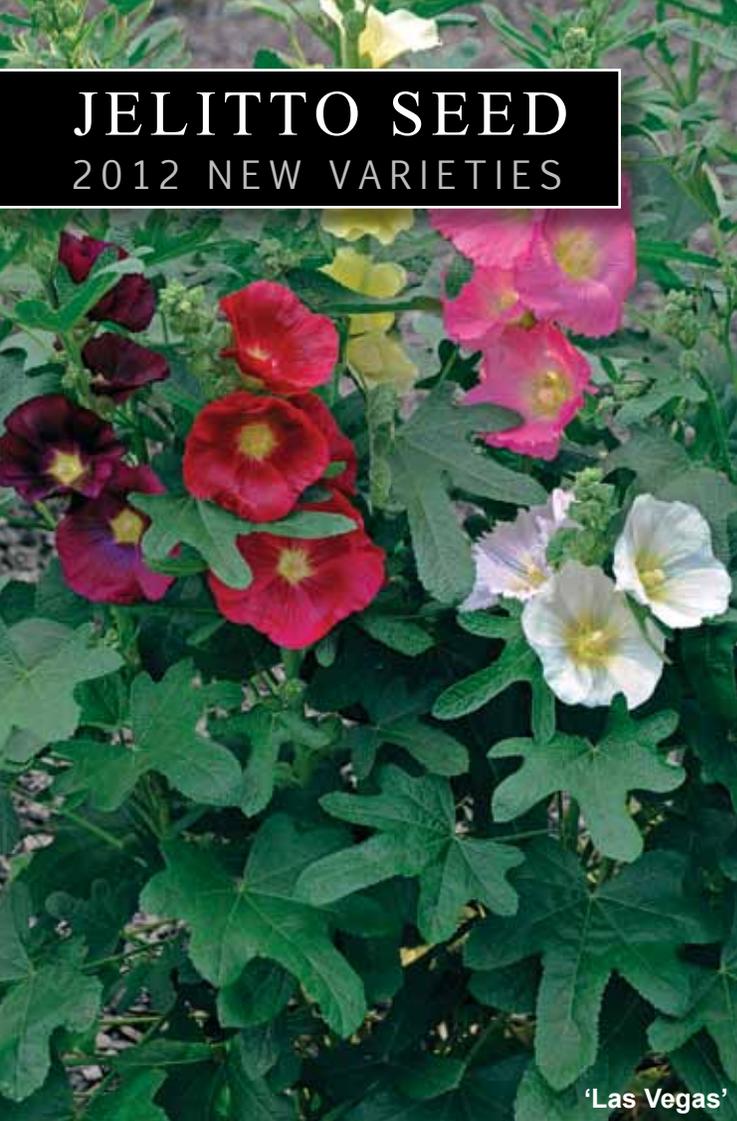


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# JELITTO SEED

## 2012 NEW VARIETIES



'Las Vegas'

### *Alcea ficifolia* 'Las Vegas'

Jelitto considers hollyhocks one of the most popular, recognizable and easy-to-grow perennials. The decorative fig leaf hollyhock, a hardy Siberian species, is hard to miss. The curvy leaves are very distinctive but 'Las Vegas' turns heads for a second look. The saucer-shaped parchment-like blossoms shine like the bright colorful lights of Vegas. And there is another payoff. This beauty is a bit shorter than most fig leaf hollyhock strains and the decorative lobed leaves climb all the way up the sturdy stems. Jelitto's 'Las Vegas' is longer lived than the typical biennial hollyhocks, and will flower the first year from seed if started early. Also available in easy-to-germinate JELITTO GOLD NUGGET SEED®.

### *Clematis integrifolia* 'Blue Ribbons'

'Blue Ribbons' is an improved, low-growing seed strain with an abundance of 4.5 cm (1.75") flowers that are up to 3 times bigger than typical forms. Jelitto's 'Blue Ribbons' remains upright to 40 cm (16") and doesn't sprawl like others, though light staking or support of other perennials is still helpful where heavy summer rains or high winds prevail. The nodding, indigo blue flowers, shaped like little parasols, bloom from May through August and are followed by decorative silvery seed heads into early winter. 'Blue Ribbons' grows wider and more beautiful every year, and is a wonderful new selection of a long-lived species that deserves wider use.

### *Lewisia longipetala* 'Little Mango'

'Little Mango' is an exciting color breakthrough in Jelitto's successful lewisia series that includes the popular 'Little Plum' and 'Little Peach'. 'Little Mango' has an abundance of spring blooms – the color of fleshy mango fruit – on short sturdy stems to 15 cm (6") with tight rosettes of leathery, lance-shaped leaves. These hybrids re-bloom in the fall (unusual for lewisias), have proved more adaptable to cold, wet winters and are excellent candidates for container production. These beauties do not suffer from rust and leaf crown rot, are first-year flowering and available once again this year in easy-to-germinate JELITTO GOLD NUGGET SEED®.



'Little Mango'

### *Trollius chinensis* 'Morning Sun'

Few perennials rival the elegant globe flower for use in evenly moist soils where summers are not unseasonably hot. 'Morning Sun' has very large bowl-shaped yellow-orange blooms and is a more compact version – only half the height – of the popular 'Yellow Queen'. The prominent nectary-petals are an attractive bonus. 'Morning Sun' forms thick, compact clumps with handsome dissected leaves and will flower in early summer. Trollius are beautiful cut flowers too. 'Morning Sun', 'Lemon Supreme' and 'New Moon' are also available in easy-to-germinate JELITTO GOLD NUGGET SEED®.



'Blue Ribbons'

'Morning Sun'

### Sunflower 'Frilly'

Consider 'Frilly' a nice novelty sunflower to help round out your cut flower sales. We were quite taken with its flower form in our trials, with its quilled outer petals and curving inner petals that formed a fine contrasting fringe around the dark pollenless disk. Very attractive on its own or in mixed bouquets, 'Frilly' will be a great addition to your cut flower selection! Matures in approximately 60-65 days.

### Sunflower 'Coconut Ice'

'Coconut Ice' is a pleasant departure from the standard yellow, orange and gold sunflowers that we're most accustomed to. It really caught our eye in trials with its wide, creamy white petals that contrast beautifully with the velvety dark brown pollenless disk. This fabulous variety is sure to be hit for both wholesale and retail markets, and will be a nice addition to summer bouquets. Matures in approximately 60-65 days.



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**HARRIS SEEDS**  
2012 NEW VARIETIES



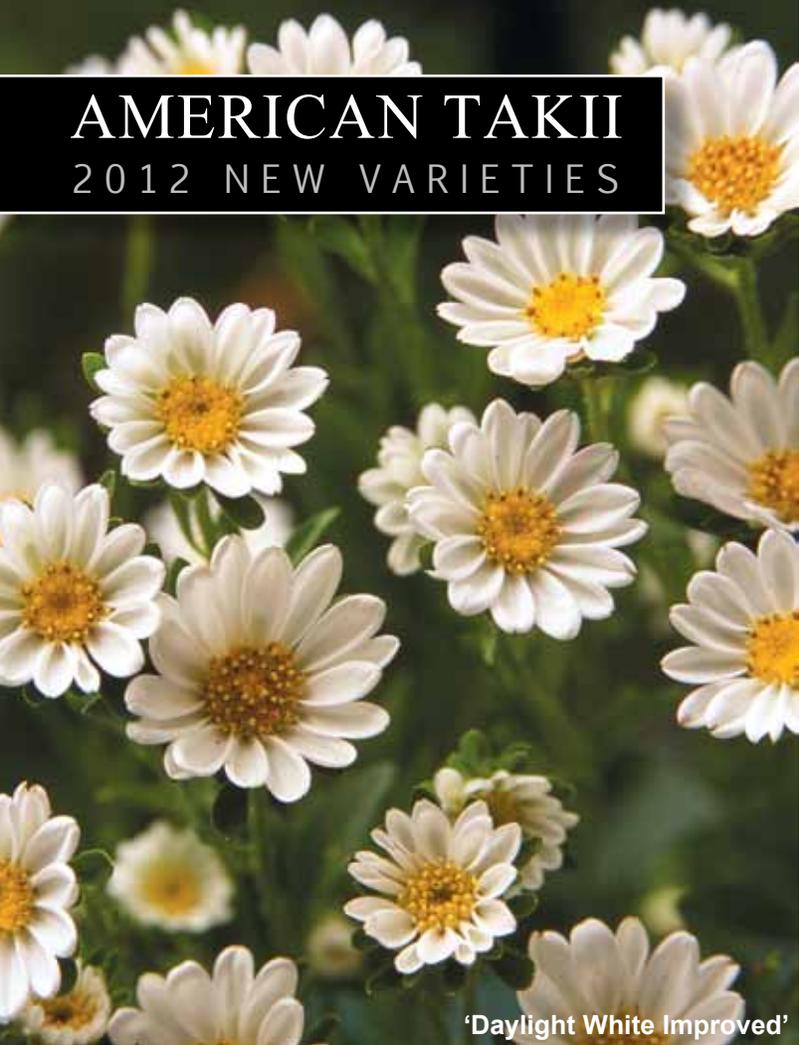
'Frilly'



'Coconut Ice'

# AMERICAN TAKII

## 2012 NEW VARIETIES



'Daylight White Improved'

### Snapdragon 'Chantilly Purple'

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. An excellent crop for short-day and low-temperature conditions. Stem length is 4 to 4.5 feet/120-140 cm. Purple is the newest addition, bringing the number of colors available in the series to nine.

### Callistephus 'Daylight White Improved'

The Daylight series features vigorous plants that produce a large number of small, single flowers. This spray-type aster is excellent for mixed bouquets. 'White Improved' has better stem length, disease resistance and a more vigorous plant than the previous white.

### Matthiola 'Carthago White'

This spectacular stock is a high-double variety that is extra early to flower. Its large blooms on sturdy stems form a full column of brilliant white.



'Chantilly Purple'

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F1 Arena III Red

Rio Light Orange

Rio Yellow

F1 Lucir Series

#### Capsicum Rio Series

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#### Callistephus series, Nina

New series, more disease resistance compared to other varieties  
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#### Cut Flower Kale series, F1 Lucir

New series, unique shiny leaves  
Available in Rose, White

#### Eustoma

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III Red, IV White

F1 Vulcan series (single flowers) - new color  
II Deep Purple



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'Carthago White'



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# GEOSEED

## 2012 NEW VARIETIES



*Alcea rosea Halo Series*

### **Ageratum 'Everest Blue'**

Outstanding new cut flower offers a unique, true blue color on tall, strong stems. Low-energy crop is suitable for greenhouse and outdoor production. Pinching induces uniform stem and broader plant. Nice addition to mixed bouquets. Height 26 inches, spread 8-10 inches.

### **Alcea rosea Halo Series** (From Thompson & Morgan)

Large 5" single blooms highlighted with broad contrasting "halo" centers. Spikes fill from top to bottom. Although bred as hollyhock landscape plants, they are definitely worth testing a specialty cut flower for local market. Each color is unique and is sure to brighten any floral arrangement. Colors: apricot, mix, pink, red and white. First year flowering. Height 6 feet.



*Celosia Sunday Series*

### **Celosia Sunday Series**

Fragrant, plume-shaped celosia is available for first time as a professional cut flower. Strong stem with long length makes it easy to cut and sell or used in mixed arrangements. They have a short, programmable production time and high yield percentage making them ideal for high-density production. Series are excellent shippers with a long vase life. Height 28-40 inches, spread 5 inches. Colors: bronze, dark pink, orange, red, salmon and wine red. Orange and wine red are a little later to flower.

### **Lisianthus Mariachi Series**

Mariachi has a quadruple flower of proven high quality. The fully double flowers are ideal for mixed or straight bouquets. Optimal plant growth and flower formation during summer make it best suited for field summer production. Colors: blue, carmine, lavender, lime green, pink, pure white and 'Best Buy' Mix (GeoSeed's blended mixture of these best-selling colors).

### **Marigold Babuda Series**

A cut flower marigold that produces 3 to 5" flower heads. Plants feature long stems and strong flower necks. Blooms continuously in the field and is adaptable to a wide range of climates. 'Deep Gold' 26-28 inches – short day; 40-48 inches – long day. 'Gold and Yellow' 16-18 inches – short day; 26-28 inches – long day.

### **Marigold Narai Series**

Top quality marigold bred for professional cut flower growers. Fully double 3 to 5" flowers have extra firm petal texture and sturdy necks and stems. Selected for disease tolerance and continuous height yield throughout hot humid growing season. 'Orange' 14-16 inches – short day; 24-26 inches long day. 'Yellow' 18-20 inches – short day, 26-28 inches – long day.



*Marigold Babuda Series*

### **Marigold 'Optiva Orange'**

This bright orange marigold has been very successful for cut flower production. It produces large and firm flowers with a long vase life.



*'Everest Blue'*

Flowers continuously in the field and is tolerant to soil-borne diseases such as fusarium. Excellent adaptability to a wide range of climates. Height 26-28 inches – short day, 48-60 inches – long day.



'Evolution White'



'Pinca'



Mariachi 'Blue'

***Salvia farinacea* 'Evolution White'**

Silvery white panicles are densely packed over vigorous, well-branched plants which thrive in a wide range of climates and exposures. Good half-hardy (Zone 8) subject for summer containers and bedding. Spikes can be cut, dried and used as everlastings in bouquets. Height 16-20 inches, spread 14 inches.

**Zinnia 'Pinca'**

Large (up to 6" across), fully double, bright pink cactus flowers. It is free flowering and heat tolerant, making it a choice field-grown cut flower. Height 36 inches, spread 18 inches.



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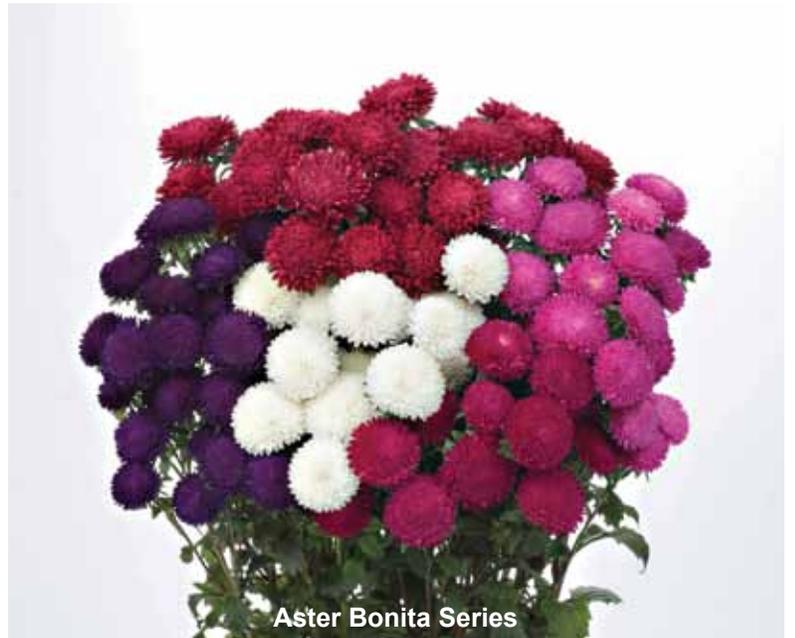
## 2012 NEW VARIETIES



Celosia Sunday Series

### **Celosia Sunday Series.**

Excellent stem length and strength for professional cut flower production, with a wide range of bright colors. Orange (pictured) is an especially bright and unique color. Film-coated seed. Height is 28-40 inches. Comes in six separate colors: bronze, dark pink, orange, red, salmon, and wine red.



Aster Bonita Series



Marigold Babuda Series

### **Aster Bonita Series (*Callistephus chinensis*)**

Fully double 2-inch pompon flowers, centers color completely. Has similar resistance to fusarium as Sakata's Matsumoto. Fits easily in program next to Matsumoto: same lighting, crop time one week longer. Flowers remain attractive when aging. Comes in five separate colors and a formula mix: blue, pink, rose, scarlet, white, and mix.

### **African Marigold Babuda Series.**

High adaptability to a wide range of climates. Continuous flowering in the field of firm, well-formed 4-5 inch blooms. Excellent vase life. Height is 2-3 feet. 'Deep Gold' (pictured) height to 4 feet. Comes in 3 colors: deep gold, gold, and yellow.

### The Freelandr®

**Rose Collection** features four unique and different cut flower collections including Antique™, traditional hybrid tea; Pompom™ sprays and Fruitilia® rose hips. All are easy to grow outdoors or in low-tech greenhouses.

**The Pompom Collection** includes six varieties: 'Orange Pompom Freelandr', 'Pink Pompom Freelandr', 'Old Fashioned Pompom Freelandr', 'Latin Pompom Freelandr', 'Lemon Pompom Freelandr', and 'Terra Pompom Freelandr'. These varieties produce sprays of large, vibrantly colored flowers. Vase life 10-12 days, stem length 12-26".

**The Antique™ Cut Flower Collection** includes four varieties: 'Caramel Antique Freelandr', 'Romantic Antique Freelandr', 'Spicy Antique Freelandr' and 'Sweet Antique Freelandr'. Flowers are large, multi-stemmed and fragrant. Vase life 8-12 days, stem length 15-24".

**The Traditional Collection** includes two varieties: 'Las Vegas' and 'Sunny Magma'. These traditional hybrid tea roses are fragrant and have elegant bud forms. Vase life 12-14 days, stem length 11-20".

**The Fruitilia Collection** includes five varieties that produce rose hips in a range of sizes and colors: 'Classic Fruitilia', 'Big Fruitilia', 'Coffee Fruitilia', 'Orange Fruitilia', and 'Red Fruitilia'. Vase life is 14-28 days, stem length 15-26 inches.



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# 2011 ASCFG CUT FLOWER SEED TRIALS

JOHN M. DOLE AND JUDY M. LAUSHMAN

This was the year of the annual aster. We had 19 large-flowered cultivars covering the range of colors. Once one of the most important cut flower species in the United States, it was loved for its long stems, large flowers, and broad range of colors, rivaling chrysanthemums and carnations. But alas, the aster fell on hard times and production has dropped quite a bit. Too bad, this is a great flower.

The catch—and there is always a catch—is that this species can be a bit hard to grow. In the central states aster yellows disease, spread by leafhoppers, causes problems, and continues to do so judging by the trialers' comments. Growers everywhere must deal with the fact that it is a long-day plant, requiring 12- to 14-hour long days. In many areas it is best grown in greenhouses or high tunnels, but a number of folks were able to grow it well in the field. Annual asters reach perfection when grown in California, but other areas are able to grow them as well.

Those able to grow asters were rewarded with beautiful flowers. The Bonitas Series (Sakata/Gloeckner) scored the best with similarly rich colors as the Matsumotos, but with

tighter centers. 'Bonitas Pink' had the highest scores. 'Rose Shanghai Rose-White' from Gloeckner also did well with its beautiful two-tone flowers. With so many cultivars and colors in the trials there was a variety for just about everyone.

This was also a banner year for bicolor sunflowers—we had five. There was a nice assortment of excellent patterns and colors to choose from based on your market's preference, ranging from relatively little contrast between the colors to very strong patterns. At the lighter end of the spectrum, 'ProCut Amber Glow' (SeedSense) was definitely a project favorite with its angelic amber halo around its dark center. The picture doesn't do it justice; you have to see it for yourself. Growing 'Musicbox' (Benary) was like tapping shuffle on your iPod—you get a little bit of everything. Petal colors ranged from a pale yellow to a vibrant orange that contrasted well with the dark center. Furthermore, some flowers were a solid color while others were bicolor. The inconsistency may bother some people, but it's sure to excite others. 'Ring of Fire' (Benary) had a brown center, its petals stamped with a deep

red ring (of fire) turning to a rich yellow color. 'Procut Bicolor Plus' (SeedSense) was very similar to 'Ring of Fire', but had shorter petals and a larger disc and the color pattern was more defined. Finally, the pattern on the petals of 'Procut Lemon Bicolor' (SeedSense) was just like 'Bicolor Plus' (SeedSense), but a paler lemon color.

'Giant Sungold' (Benary), aptly named, had very tall (around 6 feet) and thick stems, and would probably benefit from pinching to produce multiple stems with smaller heads. It had that unique teddy bear face with many gold-orange colored petals and a green center.

Classic sunflower colors were also included in the trial. 'ProCut Brilliance' (SeedSense), with its ruffled orange-gold petals around a dark center, was an interesting new take on the typical sunflower. The flower of 'ProCut Gold' (SeedSense) looked similar to 'Brilliance' in the petals, but has a fun green center. 'Valentine' (Benary) had highlighter yellow petals around a dark center. As you read the comments about 'Valentine', you can understand the need for as many trialers as possible in

our evaluation programs. One contingent loved the small heads and many branches, making it a great cultivar for bouquets. Others listed the small heads and profuse branches as a problem—these growers probably need large flowers for farmers' markets.

Another heavy branching cultivar was 'Gold Rush', which would probably benefit from pinching, as without pinching the side shoots were often too short to be useful. 'Gold Rush' had orange petals and a dark center.

Cut ageratums are a staple for summer bouquets. *Ageratum* 'Everest' (Ball/Kieft), with its classic ageratum blue flowers, produced about 8 stems per plant, averaging 17 inches, with some folks getting 20- to 22-inch stems. Trialers ranked 'Everest' high with four out of five across the board. Please take note of our rhetorical restraint in that we did not refer to 'Everest' as a monumental cultivar.

Basils have become increasingly popular as fragrant fillers for bouquets and 'Aromato' (Genesis) adds an excellent choice to the list. Here at NCSU it was our most productive cultivar with 34 stems per plant, averaging 14.5 inches long. The overall

averages were 9 stems and 21 inches. As you can see, getting longer stems requires sacrificing a few stems. Chris Wien noted that he harvested five 23-inch stems per plant in the field, and nine 26-inch stems in his high tunnels. One negative: the color was an inconsistent blend of purple and green, and some trialers preferred the all-dark foliage. And of course, the tomato/tomahto issue: for some the fragrance was too little and others too much.

Celosias are quite a variable group of plants ranging from large crested types to those with small plumes, and the search continues for the perfect cultivar. 'Orange Peach' and 'Tornado Red' from Genesis were both small-crested types, and 'Sunday Dark Pink' and 'Sunday Wine Red' from Ball/Kieft were plume types. 'Orange Peach' scored the highest with its great color and multitude of branches. The side shoots tended to produce small plumes rather than crests and this plant would probably do well with a pinch. The Sundays were also productive, with all three cultivars averaging around 7 to 8 stems per plant. 'Sunday Wine Red' had the added benefit of reddish foliage.

Several trialers commented that all four cultivars were too short and many folks reporting stem lengths of less than 16 inches. However, the celosias performed well for at least a few folks. 'Orange Peach' and 'Sunday Dark Pink' had the longest stems, averaging around 19 inches with at least one trialer getting stems up to 36 inches. 'Tornado Red' was the shortest

by all accounts, with the tallest report of only 24 inches and the average of only 13 inches.

For a great fall crop, try pepper 'Orange Globe' (Genesis). Trialers commented on the large clusters of bright orange fruit. One person stated that "this is a premium cut pepper that commanded a great price - one of our favorites". Apparently others agreed as the overall scores were quite high. As with many ornamental peppers the stems were on the short side.

This year we are lucky to report on two other trials using the ASCFG material. See the results on pages 21 and 24.

In summary, we had 49 cultivars from 6 companies. Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year. The rankings are based on the combined ratings score: market appreciation + repeat again + ease of cultivation. Thus, from the 2011 trials five sunflowers are nominated for the Cut Flowers of the Year and will join other nominations from ASCFG members: four Procut cultivars, 'Bicolor Plus', 'Brilliance', 'Gold' and 'Red Lemon Bicolor', and 'Giant Sungold'. Looking beyond the sunflowers, the top-rated cultivar was pepper 'Orange Globe'.

#### **Interpreting the trial results:**

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

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

#### **Acknowledgments:**

A hearty thank you to all of the 18 evaluators who returned their trial reports and to the seed companies for providing such great cultivars. Congratulations to Don Lareau, Zephyros Farm and Garden, 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 and Brigitte Crawford and Diane Mays for assisting with the NCSU trials. 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.



## 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.

### PARTICIPATING SEED COMPANIES

BALL HORTICULTURAL/KIEFT  
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

KIEFT-PRO-SEEDS  
Venhuizen, Netherlands  
www.kieft-pro-seeds.com

SAKATA SEED AMERICA, INC  
Morgan Hill, California  
www.sakata.com

Photos in this article by John Dole,  
with the exception of the following:

Brigitte Crawford  
Celosia 'Orange Peach', page 17  
Basil "Aramato", page 22

Polly Hutchison  
Pepper 'Orange Globe', page 25

## AGERATUM

### Ageratum 'Everest Blue' (Ball/Kieft)

**Good Qualities:** Wonderful uniform color (5); Strong stems (3); Bright, strong grower; Good height, bloom size and number of flowers, blooms for an extended period; Strong, sturdy stems; Lots of flowers, with strong stems; Continuous picking from early summer, sturdy stems, larger florets on side stems than 'Florist Blue'; Long stems, nice size flower, germination was good, nice full flowers, good dark green leaves; Good for small bouquet.

**Problems:** Short; Centre flowers are quick to turn brown (if you cut the whole plant); Inconsistent stem length and flower head size.

**Similar Cultivars:** 'Blue Horizon' (5); 'Florists Blue'.

**Postharvest Recommendations:** Floralife in cool water; Make sure stems are stripped clean.

**Comments:** Side by side, 'Everest Blue' and 'Blue Horizon' had identical heights, blooms with the only readily identifiable difference being a rose-colored center in unopened blooms of 'Everest Blue'; Hard to tell any difference between this and 'Blue Horizon'; Great introduction!; Smaller flower than the 'Blue Horizon' and not as prolific a bloomer; Useful in bouquets.

## AMMI

### Ammi majus 'Pink' (Genesis)

**Good Qualities:** Large, nice color, tall; Easy to grow, tall plant; Good quality pink when the flowers were just opening.

**Problems:** Crashes easily, floppy stems; Too similar to wild Queen Anne's lace, no real pink color when open, pink tint when tight, rabbits loved the transplants; Did not germinate well; Pink quickly fades to white as flowers mature; Uneven maturation - staggered harvest dates.

**Postharvest Recommendations:** Always remove secondary and tertiary buds.

**Comments:** White when ready to cut, not pink; This was direct seeded before drought and came up sparsely, the plants were weak and got overcrowded by weeds, so we did not see any blooms, a comparison variety, 'Snowflake', produced well in the same row; Plants got about 3 inches tall in the field, but never matured to provide any stems for cutting.

## ASTERS

### Asters 'Balloon Rose' (Gloeckner)

**Good Qualities:** None listed.

**Problems:** Died from fusarium or rhizoctonia; Too short to cut.

### Asters 'Balloon Silver-Blue' (Gloeckner)

**Good Qualities:** Beautiful large double flowers, great color combination.

**Problems:** Too short to cut; Plants survived a little longer than the rose color, but still died of fusarium or rhizoctonia before flowering.

### Asters 'Beautiful Day Rose' (Gloeckner)

**Good Qualities:** Long, strong stems (2); Might make a good potted aster; Nice color, good vase life; Nice size flower, good uniform color, germination was good, nice full flowers were well accepted on both colors; Very productive, showy plant: more suited as a bedding plant than a cut.

**Problems:** Too short (3); Very bushy, difficult in bouquets; Got aster yellows - within a few weeks of transplanting - does not like Texas; Susceptible to leaf wilt.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Very dry July contributed to short stems; Never got aster seeds to germinate for transplants, tried both seed trays and field planting with no success, believe due to the early arrival of the drought plus water restrictions; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

### Asters 'Beautiful Day Yellow' (Gloeckner)

**Good Qualities:** Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers were well accepted on both colors; Productive, early.

**Problems:** Too short (3); Got aster yellows - within a few weeks of transplanting - does not like Texas.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Very dry July contributed to short stems; Never got aster seeds to germinate for transplants, tried both seed trays and field planting with no success, believe due to the early arrival of the drought plus water restrictions; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

### Asters 'Bonita Blue' (Sakata/Gloeckner)

**Good Qualities:** Tall stems (2); Strong stems (2); Productive spray type; Can be cut as one huge stem or individually; 'Bonita Blue' is hardly a true blue, was still a nice later season color to contrast with all of the brighter colors of the moment, great contrast with the bold centers and mixed nicely with

our dahlias; Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

**Problems:** Unpinched, get a large cluster of small flowers that are hard to arrange; None; developed "rust" at end of season and then it spread from one variety to the other; Got aster yellows - within a few weeks of transplanting - does not like Texas.

**Similar Cultivars:** Similar to Matsumoto series in size of flower and plant growth, without the open center of the Matsumotos.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Try pinching early next time; Succumbed to aster yellows before reaching the marketable stage; Color more purple than blue; Aster seeds/transplants did not survive field conditions, tried both seed trays and field planting with no success, contributing factor drought conditions in May through October plus water restrictions throughout the growing season; Colors were good and full flowers, the "Blue" was well accepted and a rich color; Had no luck with the asters at all.

#### **Asters 'Bonita Pink' (Sakata/Gloeckner)**

**Good Qualities:** Long stems (2); Strong stems (2); Could be cut as one huge stem, or individually, nice hot pink color; Great color; Nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Erect spray type.

**Problems:** Of all of the Bonita cultivars, this was our least favorite color, not really a problem, just an aesthetic perception; Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Developed "rust" at end of season and then it spread from one variety to the other; Hard to use in arrangements unpinched.

**Similar Cultivars:** Similar to Matsumotos in flower size and plant growth.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Pinch next time; Succumbed to aster yellows before reaching the marketable stage; Aster seeds/transplants did not survive field conditions, tried both seed trays and field planting with no success, contributing factor drought conditions in May through October plus water restrictions throughout the growing season; Colors were good and full flowers; Had no luck with the asters at all.

#### **Asters 'Bonita Rose' (Sakata/Gloeckner)**

**Good Qualities:** Tall (2); Strong stems (2); Spray type; small, uniform flowers, no sign of tip burn; Plant could be cut as one huge

## PARTICIPATING GROWERS

CYNTHIA ALEXANDER  
Bloomlust  
Frisco, Texas

CLYDETTE ALSUP-EGGERS  
Missouri State University  
Springfield, Missouri

CHRISTOF BERNAU  
UCSC Farm & Garden  
Santa Cruz, California

LEON CARRIER  
Plantmasters  
Laytonsville, Maryland

JOSIE CROWSON  
Josie's Fresh Flowers  
Nacogdoches, Texas

CONNIE DAM-BYL  
William Dam Seeds  
Dundas, Ontario

DAVE DELBO  
Dave's Flowers  
Elysburg, Pennsylvania

KIM HAVEN  
Billabong Fresh Flower Farm  
Hempstead, Texas

CHAZZ HESSELEIN  
Alabama Cooperative Extension System  
Mobile, Alabama

POLLY HUTCHINSON  
Robin Hollow Farm  
Saunderstown, Rhode Island

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

DON LAREAU  
Zephyros Farm and Garden  
Paonia, Colorado

LINDA MCCALL  
Nature's Harmony Farm  
Long Grove, Oklahoma

DON MITCHELL  
Flora Pacifica  
Brookings, Oregon

DIANE SZUKOVATHY  
Jello Mold Farm  
Mount Vernon, Washington

ROGER TSCHANTZ  
University of Guelph  
Guelph, Ontario

CHERYL WAGNER  
Wagner's Homestead Farms  
Belleville, Michigan

CHRIS WIEN  
Cornell University  
Ithaca, New York

stem or individually; Rose was a good quality mid pink, good individual stem length and we were able to harvest as individual stems, often we grow asters as a single cut structural "filler" flower, but each color in the Bonita series produced good quality individual stems; Nice growth habit; The rose color was especially nice, sturdy stems, no aster yellows; Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

**Problems:** None; Small flower size; Developed "rust" at end of season and then it

spread from one variety to the other; Got aster yellows - within a few weeks of transplanting - does not like Texas

**Similar Cultivars:** Similar to Matsumoto series in size of flower and plant growth, without the open center of the Matsumotos. **Postharvest Recommendations:** Floralife in cool water.

**Comments:** To get more long stems, want to try to pinch early; Last in the series to bloom; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success,

contributing factor drought conditions in May through October plus water restrictions throughout the growing season; Colors were good and full flowers; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

#### **Asters 'Bonita Scarlet' (Sakata/Gloeckner)**

**Good Qualities:** Tall (3); Strong stems (2); A nice pinkish red, which I guess is in fact scarlet, very bold, vibrant color that worked well with whites and purples that we had at the same time; Good filler; Nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Productive spray type

**Problems:** Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Developed "rust" at end of season and then it spread from one variety to the other; Large bunch hard to use in flower arrangements without pinching.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Pinch early next time; Colors were good and full flowers; Had no luck with the asters at all; Aster seeds/transplants did not survive field conditions, tried both seed trays and field planting with no success, contributing factor drought conditions in May through October plus water restrictions throughout the growing season.

#### **Asters 'Bonita White'**

(Sakata/Gloeckner)

**Good Qualities:** Strong stems (2); Tall spray type, small, attractive flowers, good filler?; Could be cut as one huge stem or individually; A good quality white that held its color in the vase much better than most white cultivars and has a good contrast with the bright centers; Nice habit, good filler; Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

**Problems:** Unpinched, get a large cluster of stems and flowers that are hard to use in arrangements; Sometimes short; Developed "rust" at end of season and then it spread from one variety to the other; Got aster yellows - within a few weeks of transplanting - does not like Texas.

**Similar Cultivars:** Similar to the Matsumotos in flower size and growth habit.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** To get more tall stems, will pinch early next time; Tallest of the series;

Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May thru October plus water restrictions throughout the growing season; Colors were good and full flowers; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

#### **Asters 'Jewel Purpurit Lilac Rose'**

(Gloeckner)

**Good Qualities:** Nice stems length, strong, good vase life; Long side stems are useful, can be produced without pinching.

**Problems:** Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

#### **Asters 'Jewel Red Shadow' Mix**

(Gloeckner)

**Good Qualities:** Nice color, solid vase life.

**Problems:** Not outstanding in productivity, earliness or stem length; Most plants died from disease; Got aster yellows - within a few weeks of transplanting - does not like Texas; Short stems.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** Very few plants survived disease; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all.

#### **Asters 'Jewel Rhodilit Carmine'**

(Gloeckner)

**Good Qualities:** Tall, pretty filler, good vase life; Long side branches useful as cuts.

**Problems:** Plants died from disease (fusarium or rhizoctonia); Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Middle of the road in stem length, productivity and earliness

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** Had no luck with the asters at all; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success,

contributing factor drought conditions in May and June plus water restrictions throughout the growing season.

#### **Asters 'Lady Coral Chamois'**

(Gloeckner)

**Good Qualities:** Strong stems (2); Beautiful color, most survived disease pressure; Tall, long vase life; Nice size flower, good uniform color, germination was good, nice full flowers.

**Problems:** Too short to cut (3); A few died from disease; Got aster yellows - within a few weeks of transplanting - does not like Texas; None; Unproductive.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Had no luck with the asters at all; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season.

#### **Asters 'Lady Coral Lavender'**

(Gloeckner)

**Good Qualities:** Attractive color (2); Long life; Strong stems, nice size flower, good uniform color, germination was good, nice full flowers.

**Problems:** Too short to cut (2); 12 days later than the earliest varieties in the trial, moderately productive and moderate stem length. Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** Had no luck with the asters at all; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Succumbed to aster yellows before reaching the marketable stage.

#### **Asters 'Lady Coral Rose' (Gloeckner)**

**Good Qualities:** Strong stems (2); Best aster for surviving disease pressure; Nice color, long vase life, quick grower; Nice size flower, good uniform color, germination was good, nice full flowers; Productive mid-season.

**Problems:** Stems too short (3); Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Succumbed to aster yellows before reaching the marketable stage; Nice color, medium sized blooms; Never got aster seeds to germinate for transplants, tried both seed trays and field planting with no success; Believe due to the early arrival of the drought plus water restrictions; Had no luck with the asters at all.

### Asters 'Rose of Shanghai Crimson'

(Gloeckner)

**Good Qualities:** Long stems (3); Strong stems (2); Attractive color; Nice color; Nice size flower, good uniform color, germination was good, nice full flowers.

**Problems:** Relatively late; Died of disease (fusarium or rhizoctonia); Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

### Asters 'Rose of Shanghai Rose-White'

(Gloeckner)

**Good Qualities:** Long stems (2); Good color, long-lasting; Strong stems, nice size flower, good uniform color, germination was good, nice full flowers, loved the two-tone effect on the rose/white; Tallest stems in trial, attractive flowers with narrow petals, white with yellow centers, turning pink with age.

**Problems:** Died of disease (fusarium or rhizoctonia); Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Succumbed to aster yellows before reaching the marketable stage; Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all; Worth growing again.

### Asters 'Rose of Shanghai White'

(Gloeckner)

**Good Qualities:** Long stems (2); Strong stems (2); Most productive in trial, moderately early; Nice size flower, good uniform color, germination was good, nice full flowers.

**Problems:** Severe tip necrosis on several plants; Died from disease (fusarium or rhizoctonia); Too short to cut; Got aster yellows - within a few weeks of transplanting - does not like Texas; Color wasn't great.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Never got aster seeds to germinate well enough to get viable transplants, tried both seed trays and field planting with no success, contributing factor drought conditions in May and June plus water restrictions throughout the growing season; Had no luck with the asters at all; Succumbed to aster yellows before reaching the marketable stage.

### Asters 'Syringa' (Gloeckner)

**Good Qualities:** Large 2 1/2 in. flower; Tall, good growth habit.

**Problems:** Some plants died from disease; Got aster yellows - within a few weeks of transplanting - does not like Texas; None.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** Succumbed to aster yellows before reaching the marketable stage; Had no luck with the asters at all; Robust stems, large flowers, no sign of tip necrosis.



'ABC 2-3 Misty Blue'

## FLORA PACIFICA SURVEY

In southwest Oregon, Don Mitchell conducted a consumer survey at Flora Pacifica. Fourteen customers rated flowers from each cultivar on a scale from 1 to 10. Of nine sunflowers in the trial, 'Giant Sungold' stole the show, receiving a score of 9.9 out of 10. Of nine other cultivars, delphinium 'Benary's Pacific Formula' Mix was the favorite with 9.0 out of 10.

Sunflowers 'Giant Sungold'	9.9
'Procut Bicolor Plus'	7.8
'Procut Red Lemon Bicolor'	7.6
'Valentine'	7.6
'Procut Amber Glow'	7.3
'Gold Rush'	6.9
'Musicbox'	6.7
'Ring of Fire'	6.5
'Soraya'	6.5
Others	
Ageratum 'Everest Blue'	7.5
Ammi 'Pink'	7.1
Snapdragon 'Potomac Lavender'	7.4
Campanula 'Campana White'	8.8
Craspedia 'Sun Ball'	7.3
Delphinium	
'Benary's Pacific Formula' Mix	9.0
Rudbeckia 'Prairie Sun'	7.3
Scabiosa 'Fama Deep Blue'	7.3
Scabiosa 'Fama White'	6.5



'Aramato'

## BASIL

### Basil 'Aramato' (Genesis)

**Good Qualities:** Long stems (4); Lots of stems (3); Aromatic fragrance (3); Strong stems (2); Good color (2), even when stems are older; Good grower (2); Attractive blooms; Uniform, early to bloom; Good branching, customers were surprised to smell the nice aroma in their bouquets, it was very well accepted; It held its color well, great filler plant; Very nice; Attractive dark red foliage; Good bloom color.

**Problems:** Minimal scent (2); Washed-out leaf color; Leaves too dark for some bouquets/arrangements; Perhaps we had too much rain, but the plants didn't last as long as other basil, they "browned up" earlier in the season than I would have liked; Really big leaves were quick to wilt if plants were not fully in flower, also, did not have particularly exciting color to attract customers; Some people disliked the fragrance, hard to sell to florists; Looks diseased.

**Similar Cultivars:** 'Opal' basil.

**Postharvest Recommendations:** Floralife and cool water; Definitely needs to be harvested once flowers are open or wilting is guaranteed; Hydration is a problem, but once hydrated, lasts long in the vase; We cut into hydrator.

**Comments:** Seemed to wilt easily; Would love to have also available similar plants with lighter color or greener leaves; Had a peculiar smell, not liked by some people; When the 'Aramato' basil was done, the 'Cardinal' basil took over, I didn't lack for the fragrance in my bouquets; I won't grow this again.

## CAMPANULA

### Campanula 'Campana White'

(Ball/Kieft)

**Good Qualities:** Nice big bells and good vase life with no extra treatment; Nice, pure white; Quick to bloom: 90 days from seeding; Pretty, nice addition to bouquets; Good stem length, form and vase life, very popular with customers.

**Problems:** Plants were inconsistent in stem length and number of stems produced; Difficulty getting seeds to germinate and thrive; Short stems, short vase life.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** Seed did not germinate; Best grown from plugs, not seeds, and planted early spring, by the time transplants planted to field it was extremely hot, they succumbed to the heat and drought conditions plus water restrictions; Grow in hoop house or get it out early with protection; Floppy growth in the field without support.

## CELOSIA

### Celosia 'Orange Peach' (Genesis)

**Good Qualities:** Yummy color peachy salmon (5) especially for fall (2); Colorful, unique looking; High number of stems per plant; Lots of flowers; Branched without a pinch; Good flower shape, multi-branching with even side shoots which were great to use in smaller bouquets; Good stem length, strong stems, good branching, customers were surprised at the color in the bouquets - it was very well accepted.

**Problems:** Stems too short (2); Too long to mature in cold Pacific Northwest summer; Some branches bore plume rather than crested blooms; Does not form nice uniformed heads, mites; Small plume heads and a very muted pinky orange color, not very appealing.

**Similar Cultivars:** 'Temple Bells Orange'; 'Kurume'.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** This was our favorite celosia this year; Fabulous color! might try this one next year in the hoop; I loved the unique color and the plants performed wonderfully; Florists do not purchase celosia unless they have a specific need as they say they cannot put it in the cooler.

### Celosia 'Sunday Dark Pink'

(Ball/Kieft)

**Good Qualities:** Beautiful dark foliage matches plume color, good-sized full plumes; Nice clean color and nice stems; Great for shorter bouquets; Good form; Slightly larger than the wine red color; Lots of flowers, lasts a long time in postharvest; Branching plumes; Good full plumes, multi-branching plants; None.

**Problems:** Short (2); Slow to mature in cold Pacific Northwest summer - better than a lot of other varieties, though; Blooms do not hold up long in field, blooms did not enhance bouquets; Plants varied in color; More terra cotta than dark pink.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** Might try this one in the hoop next year; Color is very close to red; Florists do not use much celosia because they say they cannot put in cooler, therefore, they only buy sporadically, loved the color.

### Celosia 'Sunday Wine Red' (Ball/Kieft)

**Good Qualities:** Bright, colorful nice shape; Beautiful dark foliage matches plume color, good sized full plumes; None; Nice color, attractive form; Lots of flowers; Pretty green with red-edged foliage, autumn colors of muted red with orange-tipped flower on bronzy leaves.

**Problems:** Too short (3); No great beauty; Too slow to mature in cold Pacific Northwest summer; Some flowers were plumed, some crested wine red was somewhat dull.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** None listed.

**Comments:** 'Sunday Wine Red' is more branching than 'Sunday Pink'; Of all the cultivars we trialed, this one was the slowest to develop, so much so that we can't even

see color yet in Pacific Northwest; We had a dry July that most likely kept plants smaller than the should be; Florists liked the color but purchased only when they had a specific need, said they could not keep in the cooler.

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

**Good Qualities:** Magnificent red color (6); Strong stems (2); Loose fan shape—exotic looking, multi-branching habit was good for more stems to harvest!; None; Attractive form, multi-stemmed flower heads set huge; Large burgundy combs from non-pinched plants; Good stem length, good branching, customers were surprised at the color in the bouquets, it was very well accepted, many stems had good-sized heads, flowers were good size and pretty uniform; Good filler.

**Problems:** Stems are too short (4); Too long to mature in a cold Pacific Northwest summer; Nothing particularly nice about the color or shape, all the trial celosias this year were disappointing; Leaves wilt easily; Mites; Better used as a bedding plant; Thick stem.

**Similar Cultivars:** 'Toreador'

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Great bedding plant; I loved the color and the plants performed wonderfully; Florists do not purchase celosia unless they have a specific need as they say they cannot put it in the cooler.

## **CRASPEDIA**

### **Craspedia 'Sun Ball' (Genesis)**

**Good Qualities:** Bright yellow color (2); Tall stems; Stiff, viable stems, holds color well, everlasting, drying erect while upright; Small flowers on top of strong stems; Very similar to unnamed species; Unusually bright balls on long stems that dry and still look fresh; Vase life; productive, good accent flower in arrangements; Good filler flower.

**Problems:** Disappears in bouquets, takes a long time to grow; NOT a good candidate for cool summers; Plants died in hot, wet weather; Flowers were too small; None; Wiry stems; Growth in field was variable, transplants hard to establish in high tunnel after 58 days in seedling tray: should have been transplanted younger?; Few stems per plant; This was another variety that didn't do well, mostly due to weather, perhaps I got it out too early.

**Similar Cultivars:** Standard Drumstick very similar - I grew them side by side and had to check the tag; I compared this variety to 'Billy Buttons' (Harris), and 'Goldstick'

(Johnny's), and could not tell the difference among them.

**Postharvest Recommendations:** Craspedia is indestructible and lasts forever in the vase, whether given water or kept dry, there is no change in appearance upon drying.

**Comments:** Grew this one alongside the cultivar 'Billy Buttons' and that one performed much better, although still not what I'd call a crop in an unusually cool Pacific Northwest summer; Never have been a fan of craspedia; This is a tough survivor; Plants green and vigorous in early winter in the high tunnel, so will see if it overwinters. Authors' note: Chris Wien at Cornell obtained 10 stems per plant in the field and 18 in the high tunnel. Stems were 22 inches long in the field and 28 in the tunnel.

## **DELPHINIUM**

### **Delphinium 'Benary's Pacific Formula' Mix (Benary)**

**Good Qualities:** Long stems, strong stems, nice size flower, good uniform color, germination was good; Nice stem length and color mix; Easy to grow, colorful, good stem length.

**Problems:** Needs long growing time in south Texas; None; Difficulty getting seed germination; Tendency to crash.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Seed did not germinate; Crop failure; Excellent growth and healthy plants, but did not bloom due to short crop time prior to onset of Texas summer, if started in the late summer for fall planting, it would bloom in the spring; Delphinium is difficult to germinate and takes a long time to get to transplant size, with the extreme drought conditions and early heat they quickly succumbed to the heat; delphinium grows better from plugs in my zone (7b).

## **LARKSPUR**

### **Larkspur 'Galilee Blue' (Genesis)**

**Good Qualities:** Attractive blue color (4); Tall, nice addition to bouquets; Tall; Very nice stem quality, even length and diameter/strength, worked very well in our early season color range for mixed bouquets; Nice flowers, good and full; Productive.

**Problems:** None (2); Needs support in greenhouse; Some crown rot, probably due to a very wet spring; Stems short, florets widely spaced on stem.

**Similar Cultivars:** 'Qis Blue'.

**Postharvest Recommendations:** None listed.



'Sunday Dark Pink'

**Comments:** Bloomed same time in greenhouse as did fall-sown field larkspur; Planted both in field and seed trays, new transplants succumbed to the heat; Fine, but not outstanding.

### **Larkspur 'Galilee White' (Genesis)**

**Good Qualities:** Tall (2); Nice flowers, good and full; Strong stems, unique looking; Pure white; Stems were nice and full of flowers; Good stem strength and length, flowers were large and showy when fresh.

**Problems:** None (2); Needs support in greenhouse; Plants were stressed with our weather this year, I thought it best to cut the whole stem and use before the main flowers were spent; Some crown rot, probably due to a very wet spring, dried flowers were not the nicest colors, faded to brownish.

**Similar Cultivars:** 'Qis White'.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** Fine, but not outstanding; Bloomed in the greenhouse at the same time as fall-sown field larkspur; Planted both in field and seed trays, new transplants succumbed to the heat, will try again to grow provided the seeds were planted in the fall for a spring harvest.

## MISSOURI STATE FLOWER VARIETY TRIAL

Clydette Alsup, Missouri State University, did a great side project with the ASCFG trial flowers (and a few others that we left off). Celosia 'Orange Peach' was the longest-lasting cultivar with a vase life of 17 days. You can see all of her results at <http://tinyurl.com/7m4au5a>

Cultivar	Vaselife		
	Average	Maximum	Minimum
Ageratum 'Everest Blue'	7.1	12	3
Annual aster 'Balloon Rose'	5.5	15	4
Annual aster 'Balloon Silver-Blue'	6.2	13	2
Annual aster 'Beautiful Day Rose'	10.6	14	4
Annual aster 'Beautiful Day Yellow'	6.8	13	4
Annual aster 'Bonita Blue'	5.7	7	4
Annual aster 'Bonita Pink'	4.0	4	4
Annual aster 'Bonita Rose'	5.8	14	4
Annual aster 'Bonita Scarlet'	5.3	7	4
Annual aster 'Bonita White'	4.0	4	4
Annual aster 'Jewel Purpurit, Lilac Rose'	4.3	5	4
Annual aster 'Jewel Red Shadow Mix'	4.6	5	4
Annual aster 'Jewel Rhodilit, Carmine'	3.6	5	1
Annual aster 'Lady Coral Chamois'	4.7	7	2
Annual aster 'Lady Coral Lavender'	3.7	5	1
Annual aster 'Lady Coral Rose'	4.9	6	4
Annual aster 'Rose of Shanghai Crimson'	5.6	12	4
Annual aster 'Rose of Shanghai Rose-White'	4.2	6	2
Annual aster 'Rose of Shanghai White'	4.3	6	2
Annual aster 'Syringa'	5.3	7	4
Basil 'Aramato'	11.5	19	4
Campanula 'Campana White'	5.7	7	4
Celosia 'Orange Peach'	17.0	28	7
Celosia 'Sunday Dark Pink'	11.6	18	0
Celosia 'Sunday Orange'	14.5	18	11
Celosia 'Sunday Wine Red'	14.3	21	7
Delphinium 'Benary's Pacific Formula'	4.5	5	4
Lisianthus 'ABC 2-3 Misty Blue'	7.0	12	4
Rudbeckia 'Prairie Sun'	8.4	12	6
Sunflower 'Giant Sungold'	11.0	11	11
Sunflower 'Gold Rush'	5.0	6	4
Sunflower 'Musicbox'	1.0	1	1

## LISIANTHUS

### Lisianthus 'ABC 2-3 Misty Blue' (Ball/Kieft)

**Good Qualities:** Attractive color (5); Multiple blooms; Popular with customers, blooms enhanced most bouquets, large blooms; Adequate stem length; Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves.

**Problems:** Tendency to fall over in the wind; Thrips; Shorter than most lisianthus grown this year; Did not germinate well; Slow to germinate and long period of growth to viable transplants; Half as productive and 10 days later than 'ABC 1-3 Misty Blue' in these trials, but 25% taller.

**Similar Cultivars:** 'ABC 1-3 Misty Blue'; Other ABC lisianthus.

**Postharvest Recommendations:** Flor-life in cool water.

**Comments:** It was too cold for us this summer to grow lisianthus even in the hoop!, this one is slower than the others we trialed, though; By the time the seeds got to transplant size and planted to the field, they did not survive the May-October heat/drought, water restrictions were also an issue, will grow again, but not field grown and only from plugs; We had very poor germination and never planted this crop out; This variety deserves another look.

### Lisianthus 'ABC 2-4 Yellow

#### Improved' (Ball/Kieft)

**Good Qualities:** Nice color! (2); Good stem length (2); Strong stems (2); More yellow than some varieties; Nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Best of the lot for stem length and production in a lousy cold summer; Strong central stem; As productive and as early as our standard 'Echo Champagne'

**Problems:** Some single petal bloom plants; None; Short stems for the most part; Color more creamy than yellow, centre petals were too varying; Slow to germinate.

**Similar Cultivars:** Other ABC lisianthus.

**Postharvest Recommendations:** Flor-life in cool water.

**Comments:** Flowers that opened in the field had browning on petal edges and in centres, buds that opened indoors were clean; By the time the seeds got to transplant stage and planted in the field,

they did not survive the extreme heat/drought conditions from May to October, will try again but from plugs, not seeds; We had very poor germination.

## PEPPER

### Pepper 'Orange Globe' (Genesis)

**Good Qualities:** Excellent color (5); Beautiful orange, yellow, and green 1-inch mini-peppers; Good choice for fall arrangements and bouquets (2); Healthy plants, well received by customers, excellent in pepper wreath; Large pepper clusters, strong branches; Good shape and cluster size; Stems were nice and full of fruit, fruit was bright and good sized, customers were interested in the addition to the bouquet; Great in arrangements to add a little interest; Nice, long lasting.

**Problems:** Took a long time to color (2); Short stems; Waited until mid-October from a March 25 seeding to see color; Plants were full of fruit, but the stems weren't very long, if I cut the whole stem it was good and full in a bouquet and I did this for some bouquets at the end of the season; Takes a while to get the stem length needed for bouquets, selling by the stem, etc.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Harvest into hot water; Floralfife and cool water.

**Comments:** Planted direct to the field, growing conditions were extreme drought in May through October plus water restrictions throughout the growing season, good producer; This is a premium cut pepper that commanded a great price, one of our favorites.



'Orange Globe'

## RUDBECKIA

### Rudbeckia 'Prairie Sun' (Benary)

**Good Qualities:** Beautiful fresh color with greenish center (5); Strong stems (3); Uniform color (2); Easy to grow; Good straight stems; Long stems, nice size flower, germination was good; Quick to bloom.

**Problems:** Hairy rough stems unpleasant to strip leaves from, succumbed to powdery mildew late in season; Crashes easily in the heat, sometimes short; Petal tips tend to dry out a little—we found it best to harvest on early side; There were lots of flowers that

were too short to cut; The gophers loved it; None; It is shorter than other hirtas, and color is okay, but not as pretty as 'Irish Eyes' or 'Irish Spring'; Issues with stem length possibly due to water restriction limitations due to excessive drought conditions; Sometimes the petals are too long.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Floralfife in cool water.

**Comments:** More of a garden plant than cut flower, people always say that it is one of the nicest rudbeckias ever; I think it is a beautiful rudbeckia and worth growing, especially for market customers, a little difficult to sell to florists; This one is a real workhorse! Love the color with the green centers—stands out in bouquets; Nice addition to summer lineup.



'Prairie Sun'

## SCABIOSA

### Scabiosa 'Fama Deep Blue' (Benary)

**Good Qualities:** Strong stems (3); Big flowers, pretty!; Flowers first year from seed, keeps producing late into the season, good coloration; Great color, good stem length; Long stems, nice size flower, good uniform color, germination was good.

**Problems:** Poor yield (2); Pain in the butt to establish, doesn't compete well, spindly, probably better in year two; Did not bloom and burnt up in the Texas summer; None; Any transplants set out promptly wilted from the excessive heat/drought and water restrictions were an ongoing issue; Some plants are a lighter shade of blue.



'Musicbox'

Wholesalers love this variety: easy to harvest and sell; Might be better the second year.

## SNAPDRAGON

### Snapdragon 'Potomac Lavender' (Ball/Kieft)

**Good Qualities:** Strong stems (4); Straight stems (3); Rich color (2); Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Cloudy-like appearance; Good greenhouse forcing variety; Withstands heat well, strong spike, blossomed as well as any snapdragon ever grown; Good floret fill on stems, soft mixable color for bouquets.

**Problems:** Short, especially branching stems; None; A bit lighter in color to their lavender snapdragons grown; Did not germinate well; Like most cultivars, Showed late season susceptibility to rust; It was wet around here so I think they were stunted from root rot.

**Similar Cultivars:** Other Potomac snapdragons; Other greenhouse forcing varieties.

**Postharvest Recommendations:** Floralife in cool water.

**Comments:** At first I thought the color looked "washed out" and pale, but as the season went on they grew on me—it was a wonderful performer, even with our diverse weather season; Grown in greenhouse; In the heat the color fades to an unattractive washed-out shade of lilac.

## SUNFLOWER

### Sunflower 'Giant Sungold' (Benary)

**Good Qualities:** Gorgeous double flower (4); Nice size (2); Florists loved it (2); Furry with green center; Unique flower shape, pleasing in arrangements; Long stems, strong stems, good uniform color, germination was good, double flowers were well accepted; Big, bright, long vase life.

**Problems:** Thick stem (2); Buds all the way up the stem, many near bloom, weakening stem near top, many off-center blooms, would not grow again; Susceptible to disease, many buds on stem, some flowers opened only halfway; First spring planting was like a grasshopper magnet—they ate everything, stripped the leaves and started on the young flower buds, the few flowers that did start to open were very dirty looking in the center,

second planting did not have these issues; Long crop time; 75% germination, grows huge at 6" spacing, looong time to flower with long-day conditions, experienced stem rot and other fungal issues, susceptible to blow-down in summer wind/rain events, difficult to strip foliage.

**Similar Cultivars:** 'Sun King', 'Double Quick' (2); 'Teddy Bear'.

**Postharvest Recommendations:** Floralife in cool water; Did fine in plain water.

**Comments:** Very, very tall, may be more manageable pinched; This was the last sunflower to bloom in the whole patch.

### Sunflower 'Gold Rush' (SeedSense)

**Good Qualities:** Long stems (3); Similar to 'Procut Orange', but generally smaller bloom, somewhat darker color, larger center and shorter petals; Useful as bouquet-size branching with small brown center; Standard sunflower, hardy, easy to grow; 100% germination! nice, rich petal shape and color, classic sunflower; Early blooming, good golden color, green buds add contrast in bouquets, small size is good for floral work; Strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Branching; Petals orange with dark disc, profuse branching at wide spacing; Attractive, crisp-petaled bloom for the first 3 to 4 days.

**Problems:** Seemed that after it was cut the petals got weak; Some blooms too small to be usable; Many petals were cupped small, short; None; Multiple heads and side branching, grew too big at 6-inch spacing, grows tall in long-day conditions making it more likely to topple in summer wind/rain events; Very multi-branching; Moderately daylength sensitive - flowered 8 days earlier after short day exposure in seedling stage than when grown in long days, profuse branching keeps main flower size low; Side shoots usually too short.

**Similar Cultivars:** 'Procut Orange'; Lots – this one doesn't stand out for me.

**Postharvest Recommendations:** May help to cut this one before it totally opens; Harvested as fully-colored petals were just emerging, did fine in plain water; Floralife in cool water.

**Comments:** Many side buds, which are not liked for production harvest, but okay for home garden extended use; Did not pinch to encourage branching; At the 9 x 9 in. spacing used, showed a lot of branches that were wasted to get enough stem length for the main stem, in a topping trial, was very productive at higher densities.

**Similar Cultivars:** 'Fama Blue'.

**Postharvest Recommendations:** We use low-sugar holding solution; Floralife in cool water.

**Comments:** I don't see much difference between this one and 'Fama Blue', but that's not necessarily a problem; I have gotten great ones from California growers.

### Scabiosa 'Fama White' (Benary)

**Good Qualities:** Strong stems (2); Big flowers, pretty!; Straight stems, uniform height; Taller stems, nice addition to bouquets; Flowered sparsely first year from seed, nice full bloom, good clean white color; Great form; Long stems, nice size flower, good uniform color, germination was good.

**Problems:** None (2); Some of the flowers had browning at the edges; Tends to get tired at end of season, susceptible to thrips damage; Not very many stems per plant; Did not bloom and burnt up in the Texas summer; Pain in the butt to establish, doesn't compete well, spindly, probably better in year two.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** We use low-sugar holding solution; Floralife in cool water.

**Comments:** Any transplants set out promptly wilted from the excessive heat/drought and water restrictions were an ongoing issue;

### Sunflower 'Musicbox' (Benary)

**Good Qualities:** Many 4-inch blooms, medium yellow color petals with rusty brown center; Nice mix of colors, small flower size is good for bouquets. Branching plants look pretty in garden; Long stems, strong stems, nice size flower, good uniform color, germination was good; Useful as a filler in bouquets; Tall, strong, held well, good vase life.

**Problems:** Too short (3); Pollen (2); Multiple heads; Off-types present; Didn't like that I cut the whole stem at once, some flowers weren't open all the way, but would have lost center flower if I waited; None; Not a cut flower type; would be more suitable as a temporary bedding plant, but not long-lived enough for that purpose.

**Similar Cultivars:** 'Valentine'.

**Postharvest Recommendations:** Floralife in cool water; Cut when petals first opening into plain water.

**Comments:** 80% germination; Too short for anything other than bouquet work, too short for florist and flower was only about 3 inches across; Am not really a fan of this color mix.

### Sunflower 'ProCut Amber Glow'

(SeedSense)

**Good Qualities:** Beautiful unique color—apricot with orange tones (4); Strong (4); Tall (2); I loved both 'Amber Glow' and 'Brilliance', great colors, well received by customers; Very pretty color combo; 95% germination, single flower per stem, regular head size, didn't grow too big; Plant habit okay, very early to bloom; 4 -6 inch blooms; Little branch tendency, attractive slightly darker center on pale yellow petal tips, 58 days from sowing in midsummer; Nice size flower, germination was good, nice full flowers, good dark green leaves; Fast grower.

**Problems:** None (3); Blooms generally too small, thin stems; Petals look faded, unstable stem, insect magnet; Color is too pale, there is not enough definition in the bi-color pattern.

**Similar Cultivars:** 'Peach Passion'.

**Postharvest Recommendations:** Flower form stayed a little cupped when harvested at standard "petals emerging" stage for sunflower—might harvest a little more open or experiment with low sugar flower food—however, cupped shape is a nice look; Floralife in cool water.

**Comments:** Might try growing again with wider spacing in hopes of getting larger blooms; This one was my absolute favorite of all of the varieties we trialed this year, the peachy petal color is very trendy right now and these were the first ones our customers

grabbed out of the mixed varieties bucket at market, a perfect September sunflower; Didn't like color.

### Sunflower 'ProCut Bicolor Plus'

(SeedSense)

**Good Qualities:** Sharp contrasting petal colors (5); Consistent bicolor pattern from plant to plant (2); Long stems, strong stems, nice size flower, germination was good, nice full flowers, good dark green leaves; A favorite with customers, strong stems; Very attractive, stands out in bouquets, has "WOW" factor; Would work well in autumn bouquets; Beautiful dark center and 6 inch wide flowers; Strong, straight stems, vigorous grower, insensitive to daylength.

**Problems:** None; Some stem instability post harvest; Petal drop after 5-7 days in the cooler.

**Similar Cultivars:** 'Orange Mahogany'.

**Postharvest Recommendations:** Floralife in cool water; This new version is somewhat less susceptible to petal loss when the heads are brushed than the original version of 'Procut Bicolor', but not as good as standard orange varieties.

### Sunflower 'ProCut Brilliance'

(SeedSense)

**Good Qualities:** Bright attractive color (8); Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; I loved both 'Amber' and 'Brilliance', well received by customers; Similar to 'Procut Orange' and just as good; Great leaves, 5 inches across, brilliant yellow near tips and gold near center; Large, nice vase life; Very uniform, single head per plant; Firm stem, like deepening petal color towards center; Consistent, good petal fill around centres; 4-6 in. flower; Medium height and vigor.

**Problems:** None (2); A little hard to strip foliage; Centres too large.

**Similar Cultivars:** 'Procut Orange'; It is fairly similar to many other cultivars.

**Postharvest Recommendations:** Floralife in cool water; Did fine in plain water.

**Comments:** The variation in petal color from orange at center to lighter yellow-orange at tips is subtle but eye catching, I just might grow this one next year; Insensitive to daylength.



**Comments:** All varieties came in about the same time. I should have spaced the planting times; Shorter variety than others in series; 64 days from sowing in midsummer; slightly later than most orange varieties.

### Sunflower 'ProCut Gold' (SeedSense)

**Good Qualities:** Beautiful gold with green yellow center (4); Strong stems (2); Long stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Nice size; Sold every stem; Nice, early sunflower, pretty centers, long vase life; 100% germination,

fantastically uniform, stem and head size not too large so useful for bouquet work; Green center holds well in heat; Taller plant habit than other ProCuts in the trial patch, gave better stem length, 10 days earlier than 'Sunrich Gold'; 4-6 inch flowers, sturdy stems; Strongest of the series tested; Attractive medium-sized flower.

**Problems:** None (2); Hard to strip foliage, disc fades to pale gold as flower head opens, petals a little pointy for my taste; Unstable stems, petals fold backwards lengthwise; Some stems thick and necks curved, some flowers with bent petals.

**Similar Cultivars:** 'Sunrich Gold' (2).

**Postharvest Recommendations:** Floralife in cool water; Did fine in plain water.

**Comments:** Very popular with my farmers' market customers; I might be excited about this one except that 'Sunrich Gold' is every bit as uniform and easy to grow with foliage that strips much easier, also the disc on 'Sunrich Gold' stays vibrant green as the flower opens while this one fades to a dull gold; Production of green-centred sunflowers has been increasing here over the last few years; This was my favorite; Insensitive to daylength.

### Sunflower 'ProCut Lemon Bicolor'

(SeedSense)

**Good Qualities:** Attractive bicolor (3); Long stems, strong stems, nice size flower, good uniform color, germination was good, nice full flowers, good dark green leaves; Great for late season bouquets, long lasting, unique looking; Very attractive petal

coloration, good petal overlap; Early variety, strong stems, 4-5 inch flowers; Opens nicely when cut; 95% germination, single head per stem, fairly uniform stem and head size, uniform coloration; strong, vigorous plant.

**Problems:** Petal drop (2); None; Some stem instability post harvest; Grows too large at 6-in. spacing for bouquet work, also tends to topple in summer wind/rain events because it grows so big, I might try this one at 4-inch spacing; Somewhat late: 68 days in midsummer.

**Similar Cultivars:** 'Ruby Eclipse', 'Strawberry Blonde', I think this one is better than those.

**Postharvest Recommendations:** Floralife in cool water; Did fine in plain water.

**Comments:** All varieties came in about the same time, I should have spaced the planting times; Valuable addition to our summer mix; Uniform growth habit and coloration for a novelty type, the burgundy center is lovely; Insensitive to daylength.

### Sunflower 'Ring of Fire' (Benary)

**Good Qualities:** Nice bicolor pattern (4), consistent; Good rich rusty red color for autumn; Strong contrast of color in flower head; Long stems, strong stems, nice size flower, good uniform color, germination was good; Pretty; 90% germination, good.

**Problems:** Multi-branching, has pollen; None; Petals began to drop within few days of cutting; Short stems, short vase life; Multiple heads per stem, difficult to strip leaves, pointy shaped petals.

**Similar Cultivars:** 'ProCut BiColor Plus';

Something like 'Procut Bicolor', which is far easier to grow and harvest.

**Postharvest Recommendations:** Cut when petals first opening into plain water; Floralife in cool water; Did fine in plain water.

**Comments:** This is a great garden plant, but not a professional cutting type; Branching variety which, once cut, made 2-3 additional 12 inch long stems with about 3 inch flowers. Only good for short bouquet work; Grew plants close to get a single stem crop.

### Sunflower 'Soraya' (Benary)

**Good Qualities:** Beautiful deep orange color; (2); Long stems (2); Heads point up which shows well in a bouquet, various blooms sizes can be used in large or small arrangements, Almost leafless stems; Strong stems, nice size flower, good uniform color, germination was good; Upward facing.

**Problems:** None (2); Pollen (2); Bloomed later than other varieties in patch; Stem length was very short and side branches never opened; 50% germination, long time to mature under long day conditions so not yet blooming for us in Pacific Northwest.

**Similar Cultivars:** None listed.

**Postharvest Recommendations:** Cut when petals first opening into plain water; Floralife in cool water.

**Comments:** Long lateral branching is unusual for a sunflower, quite useful; Grew plants close to get a single stem crop.

### Sunflower 'Valentine' (Benary)

**Good Qualities:** Rich light yellow color with dark center (8); Branching (2); Strong stems (2); Medium sized bloom is easy to use; Developed long laterals that could also be used, long stems, nice size flower, good uniform color, germination was good; Useful as a filler in bouquets; Good side shoots; Small head size good for bouquet work; More useful as a home garden cut flower variety.

**Problems:** Too short (2); Has pollen (3); Flowers too small (2); Washed-out pale yellow (2), making them unsellable; Many unusable; Very brittle, stem caliper at the flower head is very thin and flimsy; grasshoppers like it; Short vase life; 80% germination is too sketchy for us, multiple heads, difficult to strip foliage; Muddy color.

**Similar Cultivars:** 'Procut Lemon', 'Musicbox'.

**Postharvest Recommendations:** None listed.

**Comments:** People are always looking for different colored sunflowers, and this is one; Not suitable for commercial production.



**2011 ASCFG Seed Trial Results.** The first row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed, either only one person responded for that category or several responded and all gave the same rating. The single highest score and the single lowest score in each category for each cultivar have been dropped.

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating <sup>1</sup>	Repeat again rating <sup>1</sup>	Ease of cultivation rating <sup>1</sup>	Average postharvest life (days)
Ageratum 'Everest Blue' Ball/Kieft	<b>7.9</b> 1-18	<b>16.7</b> 6-24	<b>4.0</b> 3-5	<b>4.0</b> 1-5	<b>4.0</b> 3-5	<b>9.6</b> 4-15
Ammi 'Pink' Genesis Seed	<b>5.0</b> 1-13	<b>28.1</b> 15-46	<b>2.6</b> 1-4	<b>2.6</b> 1-4	<b>3.1</b> 1-5	<b>12.0</b> 10-14
Aster 'Balloon Rose' Gloeckner	<b>1.9</b> 1.9	<b>32.4</b> 32.4	<b>2.6</b> 1-4	<b>1.0</b> 1	<b>1.7</b> 1-3	- -
Aster 'Balloon Silver' Gloeckner	<b>3.3</b> 1.6-5	<b>17.4</b> 12-23	<b>3.0</b> 1-4	<b>2.0</b> 1-4	<b>2.3</b> 1-4	<b>10.0</b> 10
Aster 'Beautiful Day Rose' Gloeckner	<b>6.1</b> 1-16	<b>14.0</b> 10-24	<b>2.7</b> 1-5	<b>2.6</b> 1-5	<b>2.9</b> 1-5	<b>11.3</b> 7-14
Aster 'Beautiful Day Yellow' Gloeckner	<b>7.8</b> 1-13	<b>15.4</b> 10-24	<b>3.2</b> 3-5	<b>2.6</b> 1-5	<b>3.0</b> 1-5	<b>8.5</b> 7-10
Aster 'Bonita Blue' Sakata/Gloeckner	<b>6.0</b> 1-15	<b>19.3</b> 12-28	<b>3.7</b> 2-5	<b>3.9</b> 1-5	<b>3.5</b> 1-5	<b>10.0</b> 7-14
Aster 'Bonita Pink' Sakata/Gloeckner	<b>5.1</b> 1-8	<b>19.1</b> 12-28	<b>3.7</b> 2-5	<b>3.6</b> 1-5	<b>3.5</b> 1-5	<b>6.3</b> 7-14
Aster 'Bonita Rose' Sakata/Gloeckner	<b>6.5</b> 1-12	<b>19.1</b> 12-28	<b>4.1</b> 3-5	<b>4.0</b> 1-5	<b>3-9</b> 1-5	<b>9.6</b> 7-14
Aster 'Bonita Scarlet' Sakata/Gloeckner	<b>5.5</b> 1-12	<b>17.1</b> 12-27	<b>3.9</b> 2-5	<b>3.9</b> 1-5	<b>3.5</b> 1-5	<b>10.0</b> 7-14
Aster 'Bonita White' Sakata/Gloeckner	<b>5.6</b> 1-10	<b>19.0</b> 12-30	<b>3.9</b> 2-5	<b>3.7</b> 1-5	<b>3.6</b> 1-5	<b>9.3</b> 7-14
Aster 'Jewel Purpurit Lilac' Gloeckner	<b>4.1</b> 1-11	<b>18.4</b> 12-26	<b>3.2</b> 3-4	<b>3.7</b> 3-5	<b>2.8</b> 1-4	<b>9.0</b> 7-14
Aster 'Jewel Red Shadow Mix' Gloeckner	<b>4.2</b> 1-11	<b>16.4</b> 12-24	<b>2.9</b> 2.7-3	<b>2.6</b> 1-4	<b>2.7</b> 1-4	<b>7.0</b> 7
Aster 'Jewel Rhodilit Carmine' Gloeckner	<b>4.3</b> 1-12	<b>17.7</b> 12-24	<b>2.9</b> 3	<b>3.0</b> 1-5	<b>2.5</b> 1-4	<b>9.0</b> 7-10

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

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating <sup>1</sup>	Repeat again rating <sup>1</sup>	Ease of cultivation rating <sup>1</sup>	Average postharvest life (days)
Aster 'Lady Coral Chamois' Gloeckner	<b>3.7</b> 1-6	<b>16.0</b> 10-25	<b>2.9</b> 1-4	<b>2.7</b> 1-5	<b>2.7</b> 1-4	<b>9.3</b> 7-14
Aster 'Lady Coral Lavender' Gloeckner	<b>4.1</b> 1-8	<b>16.9</b> 10-26	<b>2.7</b> 1-4	<b>2.4</b> 1-5	<b>2.7</b> 1-4	<b>8.3</b> 7-10
Aster 'Lady Coral Rose' Gloeckner	<b>4.6</b> 1-12	<b>17.0</b> 10-30	<b>3.2</b> 2-4	<b>2.5</b> 1-4	<b>3.1</b> 1-4	<b>8.0</b> 7-10
Aster 'Rose of Shanghai Crimson' Gloeckner	<b>4.4</b> 1-10	<b>20.5</b> 12-28	<b>3.4</b> 3-5	<b>3.2</b> 1-5	<b>2.7</b> 1-5	<b>10.0</b> 7-14
Aster 'Rose of Shanghai Rose-White' Gloeckner	<b>5.1</b> 1-12	<b>20.1</b> 12-28	<b>3.7</b> 3-5	<b>3.4</b> 1-5	<b>2.9</b> 1-5	<b>10.0</b> 7-14
Aster 'Rose of Shanghai White' Gloeckner	<b>7.3</b> 1-17	<b>15.6</b> 12-28	<b>2.9</b> 1-5	<b>3.0</b> 1-5	<b>2.4</b> 1-5	<b>10.0</b> 7-14
Aster 'Syringa' Gloeckner	<b>3.9</b> 1-10	<b>16.6</b> 13-24	<b>3.1</b> 3-4	<b>3.3</b> 3-4	<b>3.0</b> 3-3	<b>9.0</b> 7-14
Basil 'Aromato' Genesis Seed	<b>8.9</b> 1-34	<b>20.9</b> 12-46	<b>3.6</b> 2-5	<b>3-6</b> 1-5	<b>4.4</b> 2-5	<b>11.0</b> 5-18
Campanula 'Campana White' Ball/Kieft	<b>3.6</b> 1-8	<b>17.7</b> 7-24	<b>3.7</b> 2-5	<b>3.0</b> 1-5	<b>3.5</b> 1-5	<b>9.3</b> 3-14
Celosia 'Orange Peach' Genesis Seed	<b>7.3</b> 1-27	<b>19.2</b> 6-35	<b>3.6</b> 1-5	<b>3.7</b> 1-5	<b>4.4</b> 3-5	<b>10.8</b> 7-14
Celosia 'Sunday Dark Pink' Ball/Kieft	<b>7.6</b> 1-22	<b>19.5</b> 12-48	<b>3.3</b> 1-5	<b>3.3</b> 1-5	<b>4.2</b> 3-5	<b>14.6</b> 7-30
Celosia 'Sunday Wine Red' Ball/Kieft	<b>6.8</b> 3-21	<b>15.2</b> 6-56	<b>2.7</b> 1-5	<b>2.6</b> 1-5	<b>3.8</b> 3-5	<b>7.8</b> 7-14
Celosia 'Tornado Red' Genesis Seeds	<b>4.4</b> 1-12	<b>13.5</b> 6-24	<b>3.8</b> 2-5	<b>2.9</b> 1-5	<b>4.4</b> 3-5	<b>10.0</b> 7-14
Craspedia 'Sun Ball' Genesis Seeds	<b>4.9</b> 1-18	<b>22.9</b> 15-34	<b>3.6</b> 1-5	<b>3.2</b> 1-5	<b>3.3</b> 1-5	<b>18.0</b> 3-39
Delphinium 'Benary's Pacific Mix' Benary	<b>2.7</b> 1-5	<b>22.7</b> 12-30	<b>3.3</b> 1-4	<b>3.4</b> 2-4	<b>3.4</b> 1-5	<b>6.5</b> 6-7

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

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating <sup>1</sup>	Repeat again rating <sup>1</sup>	Ease of cultivation rating <sup>1</sup>	Average postharvest life (days)
Larkspur 'Galilee Blue' Genesis Seed	<b>3.4</b> 1-7	<b>28.7</b> 12-48	<b>3.7</b> 2-5	<b>3.1</b> 1-4	<b>3.7</b> 1-5	<b>6.8</b> 4-9
Larkspur 'Galilee White' Genesis Seed	<b>2.7</b> 1-8	<b>29.1</b> 12-48	<b>4.0</b> 3-5	<b>3.4</b> 1-4	<b>3.9</b> 1-5	<b>6.2</b> 5-9
Lisianthus 'ABC 2-3 Misty Blue' Ball/Kieft	<b>2.8</b> 1-7	<b>18.2</b> 6-34	<b>4.1</b> 2-5	<b>4.1</b> 3-5	<b>3.4</b> 1-5	<b>12.3</b> 7-14
Lisianthus 'ABC 2-4 Yellow Improved' Ball/Kieft	<b>2.7</b> 1-7	<b>17.5</b> 10-29	<b>3.9</b> 3-5	<b>4.0</b> 3-5	<b>3.4</b> 1-5	<b>12.0</b> 4-14
Pepper 'Orange Globe' Genesis Seed	<b>3.8</b> 1-7	<b>15.7</b> 6-31	<b>4.1</b> 3-5	<b>3.9</b> 2-5	<b>4.4</b> 4-5	<b>16.8</b> 7-23
Rudbeckia 'Prairie Sun' Benary	<b>10.1</b> 2-15	<b>20.1</b> 3-26	<b>4.9</b> 1-5	<b>4.6</b> 3-5	<b>3.7</b> 3-5	<b>9.6</b> 3-14
Scabiosa 'Fama Deep Blue' Benary	<b>4.5</b> 1-10	<b>17.8</b> 9-26	<b>3.8</b> 2-5	<b>3.3</b> 2-5	<b>3.7</b> 1-5	<b>6.3</b> 5-8
Scabiosa 'Fama White' Benary	<b>5.0</b> 1-12	<b>19.4</b> 10-28	<b>3.8</b> 2-5	<b>3-6</b> 2-4	<b>3.4</b> 1-5	<b>6.7</b> 4-8
Snapdragon 'Potomac Lavender' Ball/Kieft	<b>5.7</b> 1-12	<b>20.9</b> 8-30	<b>4.1</b> 3-5	<b>3.9</b> 3-5	<b>3.8</b> 3-5	<b>8.6</b> 3-14
Sunflower 'Giant Sungold' Benary	<b>2.2</b> 1-7	<b>42.5</b> 16-72	<b>4.5</b> 3-5	<b>4.0</b> 1-5	<b>4.2</b> 2-5	<b>10.0</b> 8-14
Sunflower 'Gold Rush' SeedSense	<b>1.1</b> 1-3	<b>39.4</b> 16-72	<b>3.5</b> 2-5	<b>3.1</b> 1-5	<b>4.3</b> 3-5	<b>8.4</b> 7-14
Sunflower 'Musicbox' Benary	<b>2.2</b> 1-7	<b>21.4</b> 12-48	<b>2.8</b> 1-5	<b>2.7</b> 1-5	<b>4.4</b> 3-5	<b>7.8</b> 6-14
Sunflower 'Procut Amber Glow' SeedSense	<b>1.0</b> 1-2	<b>46.4</b> 18-72	<b>3.9</b> 2-5	<b>3.8</b> 2-5	<b>4.6</b> 3-5	<b>8.8</b> 7-14
Sunflower 'Procut Bicolor Plus' SeedSense	<b>1.1</b> 1-2	<b>46.1</b> 18-72	<b>4.3</b> 3-5	<b>4.0</b> 3-5	<b>4.6</b> 4-5	<b>8.3</b> 7-14
Sunflower 'Procut Brilliance' SeedSense	<b>1.0</b> 1-2	<b>43.8</b> 18-67	<b>4.2</b> 3-5	<b>4.3</b> 3-5	<b>4.4</b> 3-5	<b>8.8</b> 7-14

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

Species Cultivar Company	Yield (stems/plant)	Stem length (inches)	Market appreciation rating <sup>1</sup>	Repeat again rating <sup>1</sup>	Ease of cultivation rating <sup>1</sup>	Average postharvest life (days)
Sunflower 'Procut Gold' SeedSense	1.0 1-2	45.7 18-72	4.2 3-5	4.0 1-5	4.5 3-5	9.0 7-14
Sunflower 'Procut Red/Lemon Bicolor' SeedSense	1.0 1-2	49.9 18-70	4.7 4-5	4.6 4-5	4.7 4-5	9.1 7-14
Sunflower 'Ring of Fire' Benary	2.4 1-10	32.1 18-60	3.8 3-5	3.6 2-5	4.7 3-5	7.6 6-14
Sunflower 'Soraya' Benary	2.3 1-8	32.3 14-48	3.6 1-5	3.3 1-5	4.5 3-5	8.1 6-14
Sunflower 'Valentine' Benary	3.2 1-15	28.1 12-48	3.3 2-5	2.8 1-5	4.5 3-5	8.7 7-14

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

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# 2011 ASCFG PERENNIAL & WOODY TRIALS

JOHN M. DOLE AND JUDY M. LAUSHMAN

The favorite perennial this year was rudbeckia 'Henry Eilers' (Terra Nova). With its quirky quilled petals and long, strong, easy-to-cut stems, this flower has many admirers. Plants are productive, yielding an average of 20 stems each that were a little over 2½ feet long. Some trialers cut up to 33 stems per plant, and others up to 45-inch stems. 'Henry Eilers' starts producing quickly; marketable stems were harvested from first-year plants, averaging twelve 23-inch stems per plant. Growers also noted the lack of problems with this vigorous cultivar.

Equally productive was *Lecanthemum* 'Paladin' (Terra Nova). It produced an average of 24.7 stems that were 13½ inches long. Some folks harvested 20-inch stems. Plants generated a large

flush of flowers early in the summer and smaller numbers during the rest of the season. The white daisies have yellow centers. The outer white petals are abundant, but sometimes not fully formed.

At Ko Klaver's recommendation, we evaluated a few other perennials at NCSU which were not included in the national trial: achillea 'Pink Grapefruit' and 'Wonderful Wampee'; echinacea 'Meringue', 'Milkshake', 'Pink Double Delight', 'Sundown' and 'Sunrise'; eupatorium 'Phantom'; and phlox 'Blushing Shortwood'. Of these, the latter two really stood out. 'Phantom' was a prolific flowerer of large clusters of small rosy pink blooms that work great as filler flowers. We have tested other eupatoriums in the past and this one is notable for being shorter and easier to manage than the species and some of the enormous cultivars available. In the second year we harvested 16 stems per plant that averaged 39 inches long. Even in the first year, we were able to harvest 5 stems that averaged 25 inches long. The easy-to-grow plants are cold and heat tolerant and flowered midsummer.

The large clusters of fragrant phlox flowers are well known to many consumers. Here in the South, phloxes sometimes struggle a bit. One that has done well for us is 'Blushing Shortwood' with white flowers liberally tinged with pink. It produced two 13½-inch stems per plant the first year and nine 20-inch stems per plant the second. As with all phlox the petals tend to shatter unless treated with an anti-ethylene product.



'Blushing Shortwood'



'Phantom'

The 2010 Seed Trial included several perennials that flowered from seed the first year. One of our seed trialers, Tom Parker of Parkerhouse Nursery, overwintered the scabiosa and asclepias and reported back on the second year results. He found that all plants overwintered and scabiosa 'Fama Deep Blue' and 'Fama White' produced 10 to 15 stems and 'Perfecta White' 3 to 5 stems. 'Fama White' produced the shortest stems, around 20 inches, while 'Perfecta White' produced 19-25 inch and 'Fama Deep Blue' 21-24 inch stems. Asclepias 'Oro' produced 5 to 7 stems that were 14 to 16 inches long.



'Antique Caramel'

Black spot is a common disease of roses and there is variation among cultivars. We listed the black spot susceptibility of the cultivars in the trial (see table).

Tom reports that his planting of Kordes roses was hit hard by voles during the winter. Two inches of compost was applied to the raised beds and the compost was covered by an inch of decomposed wood chips. Bait and traps were employed to eliminate the voles. Plants recovered in the 2011 growing season, and he is anticipating good flower production in 2012.

Enough of the bad news—let's focus on the flowers. Last year at NCSU we rated each of the cultivars according to fragrance, 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 scent, while the rest had limited fragrance. The worst for black spot was 'Toscana' and 'Antique Caramel'. The cultivars with the least black spot were 'Mon Petit Chou', 'Corrie Freeland', 'Party Dress', and 'Perfumed Passion'. Of these, all but 'Corrie Freeland' held most of their foliage by the end of the summer. However, 'Samba', 'Toscana'



'Oro'

In the Woody Trial we are in the second year of testing several of the beautiful shrub roses from Kordes. Although we started with 10 trialers, we received results only from Tom Parker, Parkerhouse Nursery in New Jersey. A big thank you to him for reporting back. All of the plants in the trial (both NCSU and Tom Parker) survived the winter, except for 'Corrie Freeland' (only 1 out of 4) and 'Honey Freeland' (3 out of 4) for Tom. Our planting developed rose rosette virus, resulting in the loss of a number of plants (see table). There is no control for this disease once plants are infected, so the only response is to thoroughly remove them. For each cultivar, we listed the number of plants that were infected by the end of the growing season, but we suspect all are sensitive to the virus as most sources report little resistance to the disease by any roses. Rose rosette virus is spread by mites, which need to be controlled to prevent spread of the disease. A good web resource is from the Virginia Cooperative Extension ([pubs.ext.vt.edu/450/450-620/450-620.html](http://pubs.ext.vt.edu/450/450-620/450-620.html)).

and some of the 'Corrie Freeland' plants had lost much of their foliage. Thorniness varied quite a bit from the very thorny 'Samba' and moderately thorny 'Honey Freeland' to the almost thornless 'Corrie Freeland'. 'Perfumed Passion' and 'Antique Caramel' also had relatively few thorns.



'Mon Petit Chou'

**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. 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 shipping expenses and agreed to provide data for at least two years. Plants were donated by perennial producers and shipped as 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, and Brigitte Crawford, Diane Mays, Michelle McElhannon and Iftikhar Ahmad for assisting with the NCSU trials. 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. Thanks to everyone for making this service of the ASCFG possible.



‘Paladin’

### PARTICIPATING PERENNIAL SUPPLIER

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### RESPONDING PERENNIAL GROWERS

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CHRISTOF BERNAU  
UCSC Farm & Garden  
Santa Cruz, California

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

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### RESPONDING WOODY GROWERS

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TOM PARKER  
Parkerhouse Nursery  
Mays Landing, New Jersey

## 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 2

#### **Echinacea 'Firebird'** (Terra Nova)

**Good Qualities:** Great color! (2); Strong stems, fragrance.

**Problems:** Few stems per plant.

**Similar Cultivars:** Echinacea 'Firebird', 'Tangerine Dream'.

**Postharvest Recommendations:** Held in cooler at 33F.

#### **Echinacea 'Flame Thrower'** (Terra Nova)

**Good Qualities:** Very large, vibrant, dark redish-pink/purple flowers with stems slightly longer than other trial cultivars; Color and fragrance, strong stems, continued blooming all summer until frost, survived the summer!

**Problems:** Too many short stems.

**Insects or Diseases:** Gophers love all of our echinaceas; Leaves show what might be aster yellows virus, leaves were attacked by a huge swarm of caterpillars in late July.

**Similar Cultivars:** Echinacea 'Firebird', 'Tangerine Dream'.

**Postharvest Recommendations:** Held in cooler at 33F.

**Additional Comments:** Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems; Gophers love all of our echinaceas.

#### **Echinacea 'Fragrant Angel'** (Terra Nova)

**Good Qualities:** Our customers really liked the unique combination of slender white petals and orange and yellow cones, these worked well mixed with other late-season flowers; I love the fragrance and the green and white color! Strong stems, continued blooming all summer until frost, survived the summer!

**Problems:** Too many short stems, white petals bruise and show brown/black spots that destroy their marketability.

**Insects or Diseases:** Gophers love all of our echinaceas; Leaves show what might be aster yellows virus, several plants died out over the summer, maybe because of the virus.

**Postharvest Recommendations:** Held in cooler at 33F.

**Additional Comments:** Gophers love all of our echinaceas, compared to the standard/

medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems; Stems were longer on all echinacea cultivars in this second year, compared to the 1st year. Our customers really liked Fragrant Angel's unique combination of slender white petals and orange and yellow cones; these worked well mixed with other late-season flowers.

#### **Echinacea 'Green Eyes'** (Terra Nova)

**Good Qualities:** Love the bright pink color with the green center; Color and fragrance, I love the fragrance! Strong stems, continued blooming all summer until frost, survived the summer!; The light color of the centers of 'Green Eyes' was nice, but not too distinctive.

**Problems:** We lost several of these over the winter; Too many short stems.

**Insects or Diseases:** Leaves show what might be aster yellows virus, leaves were attacked by a huge swarm of caterpillars in late July after they finished eating 'Flame Thrower' leaves; Gophers love all of our echinaceas.

**Postharvest Recommendations:** Held in cooler at 33F.

**Additional Comments:** Gophers love all of our echinaceas, compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems; Stems were longer on all echinacea cultivars in this second year, compared to the first year; Similar to 'Fragrant Angel', but with a different petal color.

#### **Echinacea 'Maui Sunshine'** (Terra Nova)

**Good Qualities:** Nice bright yellow; Strong stems; Another relatively unique echinacea color, though our plants tended more towards orange than the yellow in the Terra Nova catalog.

**Problems:** Not a strong plant, I think it may have died out before the summer was over.

**Insects or Diseases:** Gophers love all of our echinaceas.

**Postharvest Recommendations:** Held in cooler at 33F.

**Additional Comments:** Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems.

#### **Echinacea 'Pink Poodle'** (Terra Nova)

**Good Qualities:** The semi-double form and slender "petals" (ray flowers) were attractive and unique; Color, strong stems.

**Problems:** Inconsistent stem length and flower size; Plants seemed to have health problems, I doubt that many will be left in year 3, many short stems.



'Green Eyes'

**Insects or Diseases:** Gophers love all of our echinaceas.

**Postharvest Recommendations:** Held in cooler at 33F.

**Additional Comments:** Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems. 2011 was the worst growing year I have ever experienced, beginning with record snowfall and record cold (February), followed by record rainfall (May), and record heat and drought (July and August). 'Henry Eilers' did well regardless.

### **Echinacea 'Tangerine Dream'**

(Terra Nova)

**Good Qualities:** Great, bright orange color (2); Strong stems.

**Problems:** Most died during the winter, and the rest died shortly after they came out in the spring; Short, inconsistent stem length and not enough stems per plant; Didn't survive.

**Insects or Diseases:** Gophers love all of our echinaceas.

**Postharvest Recommendations:** Held in cooler at 33F.

**Additional Comments:** Compared to the standard/medicinal *Echinacea purpurea* grown from seed, this cultivar was less productive and had shorter stems.

### **Eucomis 'Oakhurst' (Terra Nova)**

**Problems:** In two years in the ground, we have not yet seen a single flowering stem, original plants came in small and weak and we planted only a dozen of the original 20, lost about half of these in the first winter and going into the second winter we are down to only 3 plants, they look good but never showed any signs of flowering.

**Additional Comments:** Lacking flowers, we did harvest a few leaves to add to arrangements, we really liked the bronzy burgundy of the foliage and this color worked well with other elements of autumn.

### **Leucanthemum 'Paladin' (Terra Nova)**

**Good Qualities:** Color, vase life; Very distinctive flowers for a Shasta-type daisy, they bloomed over a very long season, from late June onward and are still blooming now in early December, quite remarkable.

**Problems:** Short stems, many blossoms imperfect; Stem length can be a bit variable and never too many flowers at any one time, probably just need a larger stand to have a critical mass for each week's harvest.

**Postharvest Recommendations:** Held in cooler at 33F.



### **Rudbeckia 'Henry Eilers' (Terra Nova)**

**Good Qualities:** Nice, long stems, pretty flower sprays; Very long stems useful for larger design work, but so prolific that cutting stems short for "regular" work hardly seemed a sacrifice, our customers really liked the delicate architecture and open lines of 'Henry Eilers'; Attractive alone or in mixed bouquets, long vase life, easy to grow with no disease or insect pest problems so far, do not need support net, plants were larger and more flower stems in second year.

**Problems:** None to speak of; Heavy bloom period was concentrated from mid-July through early August, with smaller clusters of flowers lasting until frost—not a bad problem, just doesn't give an abundance over a long summer season.

**Insects or Diseases:** None (2).

**Postharvest Recommendations:** Definitely benefits from clean stripping and water changes; Cut into chlorinated water, then transfer to Chrysal #2 solution, hold in cooler at about 33F.

**Additional Comments:** 2011 was the worst growing year I have ever experienced, beginning with record snowfall and record cold (February), followed by record rainfall (May), and record heat and drought (July and August). 'Henry Eilers' did well regardless.

*2011 was the worst growing year I have ever experienced, beginning with record snowfall and record cold (February), followed by record rainfall (May), and record heat and drought (July and August). 'Henry Eilers' did well regardless.*

**Trial Results for Year 2 of Perennial Cultivars Planted in 2010** 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. Plants provided by Terra Nova Nurseries.

Species	Plants died over winter (%)	Plants flowering (%)	Yield stems/plant <sup>①</sup>	Stem length (inches) <sup>①</sup>	Market appreciation rating <sup>②</sup>	Repeat again rating <sup>②</sup>	Ease of cultivation rating <sup>②</sup>	Average Postharvest Life (days)
Echinacea	<b>10.0</b>	<b>100</b>	<b>13.0</b>	<b>15.5</b>	<b>4.0</b>	<b>4.0</b>	<b>4.5</b>	<b>7</b>
'Firebird'	10	100	10-16	8-19	4	4	4-5	7
Echinacea	<b>20</b>	<b>100</b>	<b>26.0</b>	<b>15.2</b>	<b>3.7</b>	<b>3.3</b>	<b>4.0</b>	<b>9.3</b>
'Flame Thrower'	0-40	100	5-50	3-18	3-4	3-4	3-5	7-13
Echinacea	<b>22</b>	<b>100</b>	<b>16.3</b>	<b>14.7</b>	<b>3.7</b>	<b>3.3</b>	<b>4.0</b>	<b>7.5</b>
'Fragrant Angel'	4-44	100	6-30	3-20	3-4	2-4	4-5	7-9
Echinacea	<b>83</b>	<b>100</b>	<b>19.2</b>	<b>11.5</b>	<b>3.7</b>	<b>3.3</b>	<b>3.7</b>	<b>7.5</b>
'Green Eyes'	26-60	100	2-50	3-15	3-4	3-4	3-5	7-9
Echinacea	<b>5</b>	<b>100</b>	<b>9.7</b>	<b>13.0</b>	<b>3.3</b>	<b>2.7</b>	<b>3.0</b>	<b>9.0</b>
'Maui Sunshine'	0-10	100	3-16	4-16	3-4	2-4	2-4	7-12
Echinacea	<b>0</b>	<b>100</b>	<b>9.0</b>	<b>12.9</b>	<b>3.3</b>	<b>3.0</b>	<b>3.3</b>	<b>7.5</b>
'Pink Poodle'	0	100	4-16	18-21	3-4	2-4	3-4	7-9
Echinacea	<b>83</b>	<b>62</b>	<b>1.5</b>	<b>10.8</b>	<b>2.7</b>	<b>2.0</b>	<b>2.0</b>	<b>7.3</b>
'Tangerine Dream'	20-66	0-100	1-4	8-15	1-4	1-3	1-3	7-8
Eucomis	<b>44</b>	<b>25</b>	<b>0.5</b>	<b>31</b>	<b>3.5</b>	<b>3.0</b>	<b>3.0</b>	<b>15</b>
'Oakhurst'	30-58	0-50	0-1	31	3-4	2-4	2-4	15
Leucanthemum	<b>25</b>	<b>98</b>	<b>24.7</b>	<b>13.5</b>	<b>3.7</b>	<b>3.7</b>	<b>3.7</b>	<b>11.0</b>
'Paladin'	0-50	95-100	8-40	6-20	3-4	3-4	3-4	7-14
Rudbeckia	<b>12</b>	<b>99</b>	<b>20.0</b>	<b>31.5</b>	<b>4.7</b>	<b>4.7</b>	<b>4.7</b>	<b>12.3</b>
'Henry Eilers'	0-50	98-100	9-33	20-45	4-5	4-5	4-5	8-15

① Data shown are from those respondents who harvested stems. Some respondents may not have harvested stems because they were too short. See comments section for more details.

② 1 to 5 scale, with 5 being the best.

Table 1. Cut rose trial results from North Carolina State University and Parkerhouse Nursery for 2011.

Cultivar	North Carolina State University				Parkerhouse Nursery	
	Yield stems/plant <sup>①</sup>	Stem length (inches) <sup>①</sup>	Black spot (rating) <sup>①</sup>	Rose rosette-associate virus <sup>①</sup>	Length (inches)	Grow again rating <sup>①</sup>
'Antique Caramel'	6	-	2.0	4	-	-
'Corrie Freelande'	0	-	4.3	3	0	5
'Honey Freelande'	12	21	3.5	4	-	-
'Mon Petit Chou'	30	21	3.0	1	8	5
'Party Dress'	16	22	1.0	4	15	5
'Perfumed Passion'	24	21	3.3	4	-	-
'Samba'	3	21	3.5	2	-	-
'Sweet Antique'	13	21	4.0	2	-	-
'Toscana'	9	21	2.8	4	18-25	5

① 1-5 rating with 5 the best.

② Number of plants remaining out of 4 plants.

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# 2011 ASCFG CHRYSANTHEMUM TRIAL

JOHN M. DOLE AND JUDY M. LAUSHMAN

For years the unofficial definition of specialty cut flowers included everything but roses, carnations, and chrysanthemums. Considering that the three species are no longer grown in the U.S. in the numbers they once were, we should welcome roses, carnations and mums back into the specialty cut flower family. We have already done so with roses—we now discuss and grow a broad range of garden and shrub roses. It might be time to welcome back chrysanthemums as well.

Let's consider why the chrysanthemum became so popular in the first place—thousands of cultivars spanning the

range of colors, shapes, and styles. Every color but true blue and true red is available. The shapes and styles range from the charming button mums to the spectacular spider mums. The petals vary from spiky quills to spoon tips to large and flat. Oh, and let's not forget the long postharvest life.

Thus, when Ray Gray of King's Mums suggested an ASCFG mum trial, we gladly agreed. Ray shipped rooted cuttings of six cultivars to 10 trialers in June. Our mums at NSCU performed well; we grew them in crates in the greenhouse and they produced very long stems by harvest time in October

and November. Others grew them in hoopouses or in the field. We had difficulties with thrips—with the good, you must take the bad—which damaged the dark-petaled varieties most. The crop time was quite long, but Ray indicates that if enough growers are interested in the cut mums, he might be able to delay shipping until later in the season.

To be honest it was great to grow mums again and remember why we loved them in the first place: gorgeous colors, cool petal shapes and long vase life. We gave some of the stems to the folks in the department and they were thrilled to get a locally-grown mum. Needless to say, the flowers remained on the desks for a long time.

As you can read from the trial results below, the other trialers also had positive reactions to the mums. One person commented emphatically on the “VERY long-lasting vase life.” Those growing the mums outdoors or in the hoopouse appeared to have fewer problems with thrips. The tradeoff might have been more caterpillars, but those are easier to handle.

A few of the trialers did not disbud the stems and that apparently did not cause problems, but one trialer indicated that the lack of disbudding made flowers smaller. We used support on our plants, and everyone agreed that support is necessary. Since greenhouse space is expensive, the success with growing mums outdoors is good to hear.



‘Yoko Ono’

However, the flowering time will need to be taken into consideration for those in the North or along the cool parts of the West Coast as plants flowered naturally in October and November. Artificial short days can be used to get early flowering, but it is a hassle unless automated, and easiest to do in a greenhouse.

Ratings for all six cultivars were good. The top-rated cultivar was ‘Maryl’ with ratings of all 4’s and 5’s. It produced an average of 11 stems per plant which were 28 inches long. Trialers loved the pink/burgundy spoon-tipped petals with yellow centers. Next most popular was ‘Yoko Ono’ due to its “wonderful zingy green color”. Highlighting the continued popularity of green flowers, one trialer said “This color goes with almost any other color flower.” It produced an average of 11 stems that were 30 inches long. At least 8 stems per plant were harvested for all of the cultivars and stem length was at least 27 inches. Some folks cut them shorter, but also were able to harvest many more stems than the average.

The main question will be how to market home-grown mums to make a profit. Competing directly with low-cost imported mums is not likely to work. Farmers’ markets, specialty supermarkets, and florists who value locally-grown products may be the best route.

Acknowledgments: A hearty thank you to the six evaluators who returned their trial reports and King’s Mums for providing the chrysanthemum cuttings. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials, and Alicain Carlson, Brigitte Crawford, and Diane Mays for assisting with the NCSU trials. 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.



‘Judith Baker’



‘Whirlaway’

## PARTICIPATING GROWERS

TANIS CLIFTON  
Happy Trails Flower Farm  
Dennis, Mississippi

CHAZZ HESSELEIN  
Alabama Cooperative  
Extension System  
Mobile, Alabama

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

DON MITCHELL  
Flora Pacifica  
Brookings, Oregon

DIANE SZUKOVATHY  
Jello Mold Farm  
Mount Vernon, Washington

CHERYL WAGNER  
Wagner’s Homestead Farms  
Belleville, Michigan

## 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.

### ‘Judith Baker’

**Good Qualities:** Beautiful variation with yellow center to bronze outer petals (3); Perfect color for fall (2); Interesting petal shape, could grow as a disbud; This cultivar had the popular deep bronze quill flowers, stem length was good, I did not disbud for a single stem, but the king flower and the many smaller buds made a nice spray; This cultivar really



‘Maryl’

held up nicely, very interesting, it also held up very nicely in Oasis and VERY long-lasting vase life! Performed well, but were late, possible heat delay? they were grown in the field and not shaded very much due to heat and winds, stems were very strong and great branching on each stem. I would grow them again, but

I would grow them inside so as to be able to cut them earlier in the season; Good focal flowers, stems not disbudded, blended well in mixed bouquets,

**Problems:** We did not experience any problems in growing this cultivar; however, it was the last to flower and should have had support, we had an October wind blast that knocked the plants over before they had flowered; As I did not disbud or stake, this cultivar laid over, so the stems were not straight, next year I will take the time to disbud and stake and I am sure it will make a tremendous difference in flower size and also produce nice straight stems.

**Insects or Diseases:** Cut worms on blooms; None; We had a few caterpillars and some leafhoppers but they did not put much pressure on the final cut; No disease problems and the Japanese beetles didn’t bother them.

**Similar cultivars:** None listed.

**Postharvest Recommendations:** I used Chrysal Pro2 as post-harvest treatment, stripped the bottom leaves; Floralife and cool water.

**Additional Comments:** We did not harvest these for sale, because they came on in November in our hoop and we need to get ventilation fans so outer petals don’t mold; We grew this mum in the hoop in bulb crates, they did fine in crates, some of our cuts were an entire stem with MANY blooms, some were just side shoot cuts, the entire stem made a beautiful bouquet in itself, the blooms were

4-5 inches in diameter so I know they would have been enormous if we had disbudded, I look forward to next year as a comparison, we had a hard time bunching the stems because they were not straight (because we did not stake them) so we sold them by the bucket full; Disbudding affects bloom size.

### ‘Maryl’

**Good Qualities:** The vibrant burgundy color and darker color in the spoon was striking against the bright yellow center (4); The plants grew strong and straight with no need for support; Cultivar was first to flower in this trial (October 1); The spoon type was attractive; Attractive unique bloom, blended well in mixed bouquets, holds color well, good vase life; Performed well, but were late, possible heat delay? they were grown in the field and not shaded very much due to heat and winds, stems were very strong and great branching on each stem, I would grow them again, but I would grow them inside so as to be able to cut them earlier in the season; This variety did not require staking, harvested for over a month.

**Problems:** We did not experience any problems in growing this cultivar; Flower necks tend to bend when cut; None.

**Insects or Diseases:** None; No disease problems and the Japanese beetles didn’t bother them; Some leafhopper but not significant damage.

**Similar cultivars:** None listed.

**Postharvest Recommendations:** Floralife and cool water; Chrysal Pro2.

**Additional Comments:** We grew these in crates in a hoop, we made two different kinds of cuts, we cut a center stem which made a beautiful bouquet in itself, then we had quite a few terminal cuts below that with smaller clusters of flowers on top.

### ‘Symphony’

**Good Qualities:** Nice light bronze color (2); Nice color for fall bouquets, good vase life; Spider flowers, stem length was good, I did not disbud for a single stem, but the king flower and the many smaller buds made a nice spray; This cultivar was very unusual and delicate looking, the color range was varied from yellow to orange to red all within the same bloom.

**Problems:** Blooms raggedy in appearance unless fully open; We did not experience any problems in growing this cultivar, however, it was among

the last to flower and should have had support, we had an October wind blast that knocked the plants over before they had flowered, even so we had a number of stems suitable for small arrangements; Because we did not disbud, the plants produced tons of stems and blooms but the stems were weak and floppy, we were still able to market to the florist because they were so unusual, however, several florists wondered how they would hold up because of the small stem and thus did not purchase, this would not have been a problem I believe if we had disbudded.

**Insects or Diseases:** None; Some leafhopper and a few caterpillars but not much pressure by either.

**Similar cultivars:** None listed.

**Postharvest Recommendations:** Chrysal Pro2 and cooler.

**Additional Comments:** Some variation of bloom color in different plants, disbudding affects bloom size; We grew these in a hoop house in bulb crates, because of the late harvest on this cultivar, we were unable to market all of our stems, I wish they bloomed earlier than November 1, I indicated a large number of marketable stems in the survey because they produced so much, however, the thin stems hindered our marketability, if it were not for the fact that they were so unusual and different, I think we would have had a hard time moving them.

### ‘Vesuvio’

**Good Qualities:** Gorgeous pure white (2); Very pretty spray; Good stem length, however, all the growth seemed to be vegetative; Performed well, but were late, possible heat delay? they were grown in the field and not shaded very much due to heat and winds, stems were very strong and great branching on each stem, I would grow them again, but I would grow them inside so as to be able to cut them earlier in the season; Unique flower form, several stages appropriate for cutting, blends well in mixed bouquets, often as the central flower.

**Problems:** This cultivar did not flower

for us, the flower stems, as of November 5, have only very tiny buds, it is doubtful we will have flowers before heavy rains set in; comes on too late for us in northwestern Washington, still not blooming by November 18; Flopped over, needs staking; Limited number of stems.

**Insects or Diseases:** None; Some leafhopper; No disease problems and the



### ‘Whirlaway’

**Good Qualities:** Massive blooms, attractive, well-formed spoon daisy clusters; Spray of light purple flowers with yellow center; The plants grew strong and straight with no need for support, cultivar was second to flower in this trial (October 10), the pink color was nice and the spoon type attractive; Easy

### ‘Vesuvio’

Japanese beetles didn’t bother them.

**Similar cultivars:** None listed.

**Postharvest Recommendations:** Chrysal Pro2; Floralife and cool water.

**Additional Comments:** This was a beautiful pure white bloom, some of the florists called it a “Snowflake” I wish it was a later bloomer for Christmas because it did look like a snowflake and would be striking against red, it would be a beautiful wedding flower, our florists wanted fall colors, not white, when this cultivar came in, started harvesting on October 29 thru December 1, as the flowers aged on the plant, they got a purple hue which was actually quite interesting, this variety fell over so needs staking, we would have had a lot more marketable stems had we staked it, some of the cuts were short, 7 inches or so.

to grow, interesting spoon-shaped petals; Performed well, but were late, possible heat delay? they were grown in the field and not shaded very much due to heat and winds, stems were very strong and great branching on each stem, I would grow them again, but I would grow them inside so as to be able to cut them earlier in the season; No staking or disbudding required.

**Problems:** Petal color faded, a lot of spindly branches; We did not experience any problems in growing this cultivar; Can’t stand the color of pink with yellow center—a taste issue; Older harvested stems did have some pollen.

**Insects or Diseases:** None (2); No disease problems and the Japanese beetles didn’t bother them. Some leafhopper, no significant damage.

**Similar cultivars:** None listed.

**Postharvest Recommendations:** Floralife and cool water; Chrysal Pro2.

**Additional Comments:** Personal taste aside, I think a mum has to be more interesting than this to be able to stand up against the much cheaper imports that are so readily available out there, this was the earliest to bloom in the trial, started harvesting October 20, it was not extremely striking in color and really not the color of choice for the fall, the center stem was a great cut with lots of flowers, the cuts under that were smaller clusters of flowers, I had a hard time marketing this flower, there just did not seem to be much interest by florists.

### ‘Yoko Ono’

**Good Qualities:** Wonderful zingy green color (5); Strong stems (2); Perfectly formed spray pompoms; Very nice spray, got a lot of comments on this one; Stem length was good; Stems were very strong and great branching on each stem, I would grow them again, but I would grow them inside so as to be able to cut them earlier in the season; Nice range of color, early cuts are a great lime green color, older cuts are a yellow/green

color—both nice, this color goes with almost any other color flower, produces a lot of cuts.

**Problems:** Bloom color changed from initial green to chartreuse to yellow quickly in our warm climate; We did not experience any problems in growing this cultivar, however, it was among the last to flower and should have had support, we had an October wind blast that knocked the plants over before they had flowered, the individual flowers were slow to fully open and did not open at once to give that wow appearance; With imported green button mums selling at \$3.25/10 stem bunch at our local wholesaler I don’t see how this could be a worthwhile crop for us, sad, because it is stunning; This cultivar laid over, it requires staking.

**Insects or Diseases:** None (2); No disease problems and the Japanese beetles didn’t bother them; Leafhopper and some caterpillar, a tiny bit of powdery mildew, but not a problem.

**Similar cultivars:** ‘Kermit’ (2).

Postharvest Recommendations: Floralife and cool water; Chrysal Pro 2.

**Additional Comments:** We grew this

cultivar in a hoop house in bulb crates, the florists use a lot of this type mum so it was not new to them, this mum is not unique to them and there is a lot available from wholesalers at rock bottom prices, so it is nice to have, but they do not see value in it, thus the grower cannot make much, one unusual thing I noticed, since we grow in a hoop house that is totally insect screened we do not have much if any insect pressure, however, one day after harvesting mums, I loaded up the buggy outside with buckets and by the time I came out with the last buckets bugs were swarming the buggy...a combination of bees, cucumber beetles, etc., it was odd, they apparently attract a lot of attention from bugs (not a good thing), One last comment, since we did not begin harvesting until end of October and into November, they took up a lot of space in the hoop house (since June) for such a short harvest period, I am not sure it is worth it, I think more money could be generated by lilies or multiple short crop time flowers. Nevertheless, Kings Mums has some gorgeous cultivars and I plan to order some other VERY unique cultivars that would be worth the space.

**2011 ASCFG Chrysanthemum Trial Results.** The first row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed, either only one person responded for that category or several responded and all gave the same rating.

Cultivar	Yield (stems/plant)	Stem length (inches)	Market appreciation rating <sup>1</sup>	Repeat again rating <sup>1</sup>	Ease of cultivation rating <sup>1</sup>	Average postharvest life (days)
‘Judith Baker’	9.5 2-20	34.0 17-55	3.8 3-5	3.7 2-5	4.3 4-5	17.0 14-22
‘Maryl’	8.8 4-24	23.5 18-32	4.6 4-5	4.4 4-5	4.8 4-5	12.3 14-20
‘Symphony’	13.8 3-5	28.9 23-34	3.8 2-5	3.3 1-4	4.5 4-5	15.0 15.0
‘Vesuvio’	8.3 2-60	29.6 7-37	3.6 1-5	3.2 1-5	4.2 3-5	17.7 14-24
‘Whirlaway’	11.0 5-30	27.0 22-31	3.3 2-5	3.2 1-5	4.7 4-5	14.7 12-17
‘Yoko Ono’	10.9 3-25	30.6 12-45	4.2 3-5	3.5 1-5	4.3 4-5	16.7 14-21

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

# 2012 Cut Flower Growers School



February 18 and 19, 2012 UW-Madison campus

Grower-instructors include 3rd generation flower grower **Joe Schmitt** and **Jeanie McKewan** of Brightflower Nursery.

The Wisconsin Cut Flower Growers School is a two-day workshop designed to help new and beginning growers learn the ins and outs of producing and marketing cut flowers.

Learn from experienced growers about variety selection, seed starting, planting and harvest schedules and methods, post-harvest handling, pest management, tools and equipment, and direct marketing. Find out how to turn your passion for flowers into a sustainable small business. Network with other growers in and around Wisconsin. Handle small tools at a show-and-tell table. Speakers will emphasize sustainable and organic production practices.

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Meal preference: Vegetarian \_\_\_\_ Vegan \_\_\_\_ Meat \_\_\_\_

Individual enrollment: \$200      Farm partner or spouse: add \$125

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Clip and return to CIAS, Attn: Cut Flower Growers School, 1535 Observatory Drive, Madison, WI 53706

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# POSTHARVEST TREATMENT OF SPECIALTY CUT FLOWERS

North Carolina State University Report for 2011

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Alicain S. Carlson, Briggitte D. Crawford, John M. Dole, and Ingram F. McCall

Department of Horticultural Science  
North Carolina State University

*This project was supported by the American Floral Endowment, the Association of Specialty Cut Flower Growers Research Foundation, and numerous suppliers. The authors would like to thank Diane Mays, Benjamin Brindis, Pamela Taheri, and Iftikhar Ahmad for assisting with growing and harvesting the cut flowers.*

Every year we conduct vase life studies on promising species and cultivars from the ASCFG Perennial, Seed, and Woody trials. This year's trial included 21 new cultivars that we tested for their postharvest potential. About half the varieties came from two classic cut flower genera: *Helianthus* (sunflowers) and *Echinacea* (coneflowers); however, these weren't just any old sunflowers and coneflowers! We trialed a rainbow of colors, and various shapes, sizes, and color patterns, resulting in new twists on old favorites. Who says you can't teach an old flower new tricks?

This was definitely the year for bicolored sunflowers – we had 5 of them – but we had some classics too. There were lots of excellent patterns and colors to choose from based on your market's preference. 'ProCut Amber Glow' was definitely a project favorite with its angelic amber halo around its dark center. The picture just doesn't do it justice; you have to see it for yourself. 'ProCut Brilliance', with its ruffled orange-gold petals around a dark center, was also an interesting new take on the classic sunflower. The flower of 'ProCut Gold' looks very similar to 'Brilliance' in the petals, but has a fun green center. Growing 'Musicbox' was like tapping shuffle on your iPod – you get a little bit of everything. Petal colors ranged from a pale yellow to a vibrant orange that contrasted well with the dark center. Furthermore, some flowers were a solid color while others were bicolor. The inconsistency may bother some people, but it's sure to excite others. 'Valentine' had highlighter-yellow petals around a dark center. 'Musicbox' and 'Valentine' had smaller head and stem sizes than the other cultivars and would be perfect for bouquets.

The echinacea we trialed this year are not your mom's purple coneflower! New colors abound in the world of echinacea and may be helpful in getting your customers



excited. 'Flame Thrower' was an extremely productive plant, producing many long-stemmed, dark-centered, yellow-orange colored flowers. The flowers of 'Maui Sunshine' with their yellow cones and solid yellow petals gave us a sunny disposition. 'Milkshake' was unique with its single row of longer white petals under several rows of shorter fringed petals and a yellow-orange cone. 'Pink Double Delight' had the same petal arrangement as 'Milkshake', but in a great pink color and dark cone. However, even in the second year of growing this plant we did not get good doubling for a nice full pom-pom appearance around the cone. The warm orange-pink petals and dark cone of 'Sundown' definitely set it apart from the usual purple coneflower.

One interesting problem we experienced this year that you might encounter is sunflower moth (*Homoeosoma electellum*) on *Echinacea*. Stanton Gill did an excellent job during his talk at the ASCFG National Conference Growers' School informing us about how this pest has the potential to challenge our coneflower crops. The major signs we saw were

malformed cones and uneven or lack of petal formation caused by the larvae, which look like caterpillars, in the cones. When the flowers were brought inside the caterpillars were everywhere, posing a postharvest problem. It was definitely a learning experience.

## The Details

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+4F 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 over, 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 summer. These procedures were set up to provide a consistent environment so that anyone else should be able to repeat our work and get the same results. 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 some 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.

## The Results

### *Ageratum* ‘Everest Blue’

‘Everest Blue’ had the longest average vase life of 16.1 days in DI water. The addition of hydrator or holding solutions (or both) shortened the vase life by an average of at least 5.1 days. We harvested ‘Everest Blue’ when 75% of the flowers were fuzzy for best vase life. Our most common postharvest problem was drooping of the flowers.

### *Asclepias* ‘Oro’

Our second-year ‘Oro’ plants produced stems with an average vase life of 10.3 days, which were unaffected by our preservative treatments. Its gorgeous buds have a hint of red and open to a rich golden color. The unique seed pods might also be of interest; however, we did not do postharvest tests on the pods.



with the holding solution to get stems to perk up faster, but do not use a hydrator alone. We harvested stems with and without flowers. ‘Aramato’ had a unique look with its mottled purple foliage, purple stems, veins, and inflorescence with light purple/white flowers.

### *Calycanthus* ‘Hartlage Wine’

*Calycanthus* stems treated with a holding solution lasted longer (9.4 days) than untreated or treated with just a hydrator (6.1 days). We also noted that the foliage stayed hydrated well and closed buds will open.

### *Celosia* ‘Orange Peach’

This peach-colored plume celosia flower had an orange brainy tip that

*Growing ‘Musicbox’ was like tapping shuffle on your iPod – you get a little bit of everything. Petal colors ranged from a pale yellow to a vibrant orange that contrasted well with the dark center.*

### *Basil* ‘Aramato’

The addition of a holding solution is definitely recommended as it increased the vase life of ‘Aramato’ from 13.3 days without holding solution to 23.1 days. From our own observations, use hydrator

had an overall vase life of 31.8 days. The addition of hydrator alone is not recommended, as it lowered the vase life to 23.2 days. However, even the absolute shortest-lived ‘Orange Peach’ stem lasted 12 days, which is still awesome.



**'Pink Double Delight'**

***Celosia* 'Sunday Dark Pink'**

None of the treatments significantly affected vase life of 'Sunday Dark Pink', which had an overall vase life of 30.7 days. 'Sunday Dark Pink' had a small single pink plume and green foliage. As with other *Celosia* in the trial, stems were terminated for foliage issues or rooting in the vase rather than flower head issues.

***Craspedia* 'Sun Ball'**

We harvested 'Sun Ball' when flowers were showing full color, and that full color lasted for a long time. The different treatments did not have an effect and stems lasted for an average of 38.7 days. We terminated 'Sun Ball' when the yellow globe-shaped inflorescence faded to brown.

***Echinacea* 'Flame Thrower', 'Maui Sunshine', 'Milkshake', 'Pink Double Delight', and 'Sundown'**

For all the coneflowers tested this year the recommendation is the same: use a holding solution. 'Flame Thrower' was the one oddball that gave us some interesting results with the best vase life of 14.7 days when no preservatives were used. Also, a hydrator reduced its vase life. 'Maui Sunshine' averaged 11.7 days, 'Milkshake' averaged 8.8 days, 'Pink Double Delight' averaged 12.4 did not affect 'Music Box' producing an average vase life of 7.9 days. Vase life of 'Valentine' was improved by 2.4 days when a holding solution was used, giving a vase life of 11.3 days. The general trend we have been seeing for years is that holding solutions either increase vase life or have no effect and are not detrimental. Therefore, holding solution should be used with your sunflowers.

**Pepper 'Orange Globe'**

The use of a holding solution is recommended for improved vase life of 'Orange Globe', as it brought the vase life from 19.9 days to 23.2 days. Stems were terminated when 50% of the peppers wrinkled. What little foliage 'Orange Globe' has around its peppers needs to be removed because it doesn't stay hydrated.

***Physocarpus* 'Coppertina'**

'Coppertina' stems benefited from any preservative treatment, which improved vase life to 12.3 days from 10 days when no preservatives were used. We harvested the stems with the red clusters of star-shaped seed pods, but terminated the stem when the foliage wilted or dried. 'Coppertina' has beautiful foliage that is a lighter red than 'Summer Wine' and 'Diablo'.

***Rudbeckia* 'Henry Eilers'**

'Henry Eilers' benefitted from the use of a holding solution, which yielded a vase life of 14.7 days. It had very long stems, especially in the second year, and multiple flowers per stem with tubular yellow petals and brown eyes. Keep a close eye on your buckets and vases because 'Henry Eilers' uses lots of water. We found that this cut made a great filler in our floral designs.

***Salix purpurea* 'Hakuro Nishiki'**

None of the treatments significantly affected the vase life of this willow, which averaged 10.1 days. Some stems started to root in the vase, but the beautiful variegated foliage still desiccated. The new wood was a golden yellow color, which has design potential even without the foliage.



**'Henry Eilers' in floral arrangement**

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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.

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- Growing techniques
- Pest management strategies
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- Quality postharvest care
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- Marketing opportunities



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## Can We Make Sunflowers More Productive with the Right Pinching and Spacing Combinations?

Chris Wien

Wouldn't it be nice to cut more sunflower stems with less work? Yes, you say, but what's the catch? It comes down to whether you would rather plant, or pinch. Sunflowers grown as cut flowers can be sorted into two groups: those which have a single stem, and do not branch under normal spacings, and those which develop a smaller central flower, but produce many harvestable branches. The former are preferred

by commercial producers, the latter are marketed more to home gardeners. But the branching types form few branches when crowded, and both types will branch if deprived of their growing point (pinched or topped) when they have about 6 fully developed leaves, before flowering. So depending on how you handle them, the two types tend to merge.

We conducted a field experiment at Ithaca, New

York (Zone 5), to determine if we could increase sunflower productivity with less effort. The study looked at three varieties, grown at three plant spacings, and either pinched or left alone (single stem). The varieties were 'Starburst Lemon Éclair' and 'Goldrush', both branching types, and 'Procut Amber Glow', a non-branching type. These were grown on 4 foot wide beds, at 6 x 6, 9 x 9 and 12 x 12 in., resulting

in 6, 4 and 3 rows per plot, respectively. Half the plots were pinched when the plants had six leaves (3 pairs), the rest were allowed to grow normally. We harvested only the inner rows in each plot to avoid edge effects, and repeated the experiment three times.

The study confirmed the well-known fact that the more stems in a given area, the smaller the flowers. So to evaluate the results of this study, we had to decide what size of sunflower is marketable. We decided that only flowers with a disk diameter greater than 1.5 in. were acceptable, since smaller flowers were frequently misshapen, or had such thin stems that they collapsed.

At the denser spacings, stem numbers and yield increased (Table 1). Pinching also increased stem numbers, about 3 to 4 times, depending on the variety. When the two factors were combined, the number of stems per plot got so high that flower size decreased below marketable levels. The optimum combination of pinching and plant population varied with the variety. For 'Starburst Lemon

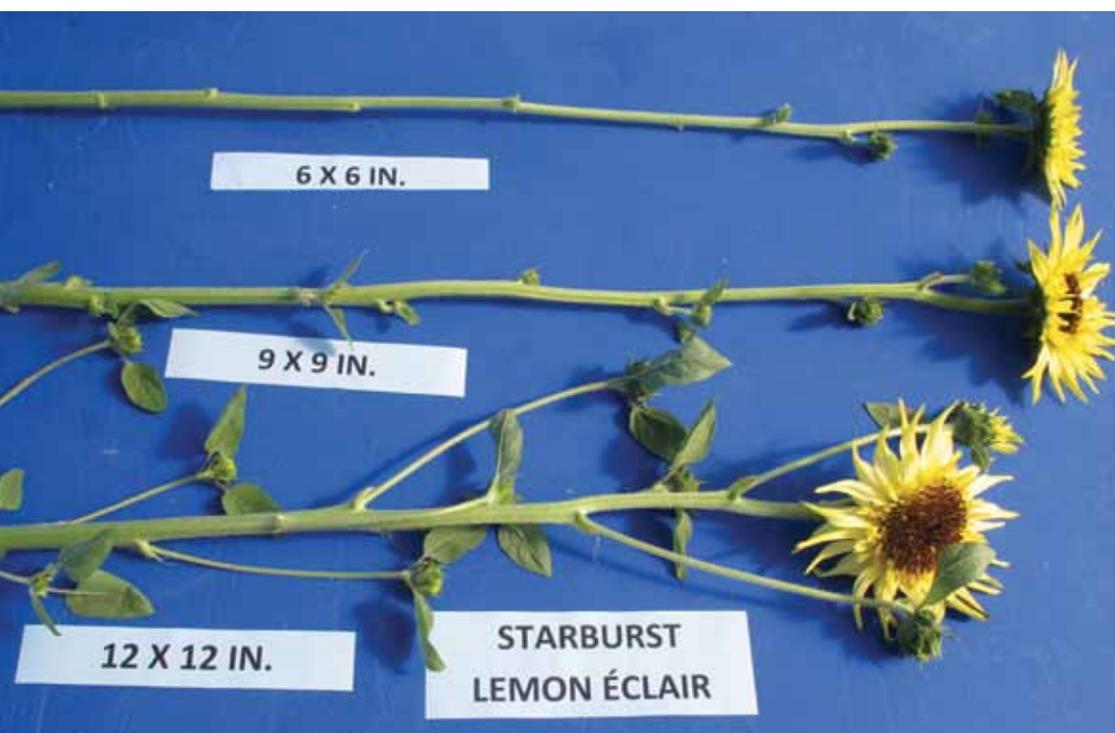


Fig. 1. Starburst Lemon Éclair sunflower grown at 3 spacings in the field, showing degree of branching.

Table 1. Effect of spacing and pinching at the 6-leaf stage on yield (stems per 1000 ft<sup>2</sup>) and flower diameter of 3 varieties of sunflower grown in a field experiment in 2011 in Ithaca, New York.

Variety	Spacing, in.	Stem yield/1000ft <sup>2</sup>		Flower diameter, in.	
		Not pinched	Pinched	Not pinched	Pinched
Starburst Lemon Éclair	6 x 6	3,905	15,744	1.8	0.9
	9 x 9	1,792	6,904	1.9	1.1
	12 x 12	944	5,144	2.2	1.2
Goldrush	6 x 6	4,083	9,500	1.9	1.4
	9 x 9	1,679	6,272	2.2	1.6
	12 x 12	1,111	4,222	2.3	1.6
Procut Amber Glow	6 x 6	4,000	10,971	2.1	1.3
	9 x 9	1,729	5,876	2.7	1.8
	12 x 12	1,000	3,389	2.8	1.8

Éclair’, all pinching treatments resulted in unacceptably small flowers, although stem yields were high. For yields of nearly 4000 stems per 1000 ft<sup>2</sup>, the high density unpinched treatment was best. For ‘Goldrush’ and ‘Procut Amber Glow’, pinched plants grown at 9 x 9 in. spacing produced 50% more stems than the unpinched plants grown at 6 x 6 in. spacing, and two and a half times as many as the unpinched plants grown at 9 x 9 in.

What is best in your operation? If planting at high density on your farm is a hassle, consider using a wider spacing and pinching the plants to achieve good yields. For branching varieties such as ‘Starburst Lemon Éclair’, high density planting without pinching suppresses branching and yields flowers of acceptable size (Fig. 1). Another factor to consider is seed versus labor costs – single stem production requires more seed, but pinching has higher labor costs. Also, smaller flowers work great for mixed bouquets and arrangements, while larger flowers are usually needed for single species bunch sales at farmers’ markets. If you have a variety of customers, you may want to grow a variety of both pinched and single stem.

Acknowledgements: I am grateful for the competent technical assistance of Sara Clark and Priscilla Thompson, and thank Dr. Tom Heaton at NuFlowers LLC for supplying seeds and financial support for this study.

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Fig. 2. The sunflower pinching and spacing study, showing Procut Amber Glow in the foreground.

## Wooly Bears and Hedgehog Gourds

Janet Foss

In winter I have time to scan seed and plant catalogs for what I want to grow the following season. Sometimes I purchase seeds that I haven't really thought through, and when they've arrived, I wonder "What was I thinking?"

A few years back I bought seeds of what seemed to be wild cucumber—interesting for florists, or so the seed catalogs said. My mood was different after the seeds arrived, and I wondered how those had ended up in my order. I no longer felt like growing them and I kept imagining plants that looked like the wild cucumbers which grow along a nearby river, and totally take over the whole roadside landscape. Did I really want something like that in my garden? And were they really something I would have the guts to offer to my customers?

When the growing season came I planted all the standards I wanted or had to grow. When it came to making space for new or unfamiliar plants, I would look at these packets of wild cucumber seeds, and... choose something else. A year went by with that seed still sitting in my seed box. The following year the same thing happened: I wanted to try them but they just wouldn't fit in. I

didn't even know the genus or species for this thing! I finally decided I better just plant those seeds even if it was just so that I wouldn't have to look at them anymore.

The seed did look very much like cucumber seed. I planted them individually in 32-plug trays, and when they sprouted (quite quickly) they looked like furry-leaved cucumber plants. I let them grow for a few weeks in the greenhouse until they filled out the plug trays and then transplanted into black plastic. I use black plastic mainly to control weeds, but it does warm the soil a little as well. As they began to grow and spread, I considered them puny in every way compared to edible cucumbers. They had smaller leaves, stems and fruits. I thought if the fruits of cucumbers would grow like these plants it would be great as the fruit never gets bigger than its mature size, which was about two and a half inches long. They were the perfect size for gherkins even a month on the vine.

As I watched them grow into a harvestable size, I began wonder what I would do with them. How should I sell them? They were certainly interesting—super furry, and striped like sea urchins. Should



Wooly Bear

I pick them like cucumbers in bowls or what? I spent a lot of time wondering what I should do, because it wasn't a fair trial if I didn't try to sell them. Finally, I cut the entire plant right at the base and tied the whole thing into a bundle. Each plant had eight to ten vines that radiated out from the

center about four to six feet, and each vine had prickles like little horns. There were lots of uniform fruit per plant. It made an unusual but useful design.

I grew this ornamental vine because it was very unusual, and while not everyone wanted to buy it, everyone noticed and commented on what they



Hedgehog Gourds

would use it for. That made it a success in my eyes. I planted only a couple flats; we grew it on the ground rather than a trellis, which allowed us to harvest the whole plant with one cut. It was priced to florists for eight dollars a bunch and we were able to sell most of what we planted. It was excellent for filling a floral arbor or for draping out of an arrangement.

I also tried two *Cucumis* species. Woolly bear (*Cucumis dipsaceus*) was my favorite. I harvested the green fruit which dried on the vine. The fruits were less fragile when freshly harvested. The weird-looking fruit almost looked like it could attach itself to clothing, much like a cocklebur. It reminded me more of a porcupine than a woolly bear.

The other was the hedgehog gourd, or African horned melon. Supposedly the green fruits with yellow strips are edible, but I think they're grown mainly as ornamentals.

Neither the woolly bear or hedgehog gourd are weeds here, but online research tells me that they have naturalized or become weeds in Hawaii, and maybe other suitable climates as well. I'm not sure they would flourish in my area; they just don't seem that vigorous.

---

*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.*

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## Seed Germination Using LED Lights

Johann Buck and David Kuack

Light, along with water, oxygen and temperature, are the environmental factors that affect seed germination. Light can stimulate or inhibit seed germination or have no effect at all. Some plants that require light for germination include ageratum, begonia, browallia, coleus, geranium, impatiens, lettuce, nicotiana, petunia and snapdragon.

Many growers who provide supplemental light for seed germination have used fluorescent lamp fixtures. These lamps are typically suspended 6 to 12 inches above the seed trays. The lights are generally operated for 14 to 16 hours a day. Some growers who operate more elaborate production facilities have installed high intensity discharge (HID) lamps. These can be

used to provide supplemental light for both germination and growing-on of a crop, especially during dark weather periods and the shorter days of the year.

### Consider LEDs

The light-emitting diode (LED) is gaining interest among growers and other horticultural-related companies, including breeders and plant propagators. LEDs are more like computer chips than light bulbs because they are solid-state semiconductor devices. LEDs are more efficient than incandescent and fluorescent lamps and comparable to HID lamps. Unlike these traditional lamps, LEDs generally do not burn out. The life expectancy of LEDs is based

on the time (in hours) required for the light output to drop below a percentage of the original maximum intensity under optimal operating conditions.

Growers generally replace their lamps when the light output drops below 90 percent. Those who install LEDs can expect a long operating lifetime of approximately 25,000 to 50,000 hours. The LEDs' long operational life reduces the costs associated with replacement, disposal and labor. LEDs turn on and off instantly and do not require warm-up time like HID lamps. LEDs also emit little or no radiant heat, enabling them to be placed closer to the plants. This allows growers to produce multilayer crops without having to be concerned about having to remove excess heat.

### Improved Light Efficiency

Most plants use light in the blue (450 nanometers) and red (660 nanometers) wavelengths of photosynthetically active radiation for photosynthesis. LEDs designed for use in horticultural applications emit light in the red or blue wavelengths. In some cases far red light is needed by the plant and can be added to the overall LED light recipe.

Changing the light recipe enables growers to manipulate the light quality to specifically match the plant species and stage of production. LEDs give growers the option of changing the light quality to match what they are trying to accomplish with a crop, be it speed up growth to reduce crop time, hasten and/or increase flowering,



Philips GreenPower LED Production Module (lit)

improve plant quality, grow without daylight or increase plant production with a multilayer cropping system.

### Multilayer Production Systems

Both hobbyists and professional growers have expressed an interest in using LEDs during seed germination. For professional growers, a multilayer production system can be a costly and time-consuming design and construction project. Because of these issues, smaller growers believe that LED technology is unattainable. This is not the case.

Many large growers start with LEDs by conducting small-scale trials. These trials are comparable to what hobbyists or smaller growers would need to satisfy their entire crop.

An example is the Philips GreenPower LED Production Module. It is designed to replace fluorescent lamp fixtures. The Production Modules are available in two lengths (4 and 5 feet). The Production Modules provide either a combination of deep red and blue light or deep red and white light. The white light is useful for color recognition of plants and is easier on the human eye. Most growers choose the deep red and blue light Production Module because its price point is lower than the deep red and white light module.



Philips GreenPower LED Production Module (unlit)

Generally speaking, one Production Module can replace two fluorescent tube lamps. For example, growers commonly use a plant production footprint of 4 feet by 2 feet. These dimensions are common for most flower shipping carts used by U.S. growers. Generally speaking, 150 to 200 micromoles of deep red and blue (or white) light from LEDs is adequate for seedling production based on an average photoperiod of 16 hours. This seed germination cart design would require three or four 4-foot Production Modules. At 35 watts per module and using an average of \$0.10 per kilowatt-hour, one 4- by 2-foot cart shelf would cost \$0.17 per day to light. The price range for the Production Module depending on the length installed is approximately \$150 to \$200 per module.

The useful life expectancy for a Production Module is approximately 25,000 hours. The average grower will use a module for approximately 90 days during the year. Therefore, a module could last 17 years and would only lose 10 percent of its maximum light intensity.

### Real World Experience

Kieft-Pro-Seeds Holland, a breeder of F1 and open-pollinated annual and perennial flower seed in Venhuizen, the Netherlands, recently installed a Philips LED system. The setup consists of more than 7,000 LED lights (15 percent blue and 85 percent red). The LEDs are expected to last 10 times longer than a standard fluorescent light system. The return on investment for the LED system is expected to be less than three years.

Willem Koopman, seed operations manager at Kieft, told FloraCulture International that the company had been trialing the system for nearly four years. "Now we can start to benefit from this fresh technology," Koopman said. "This will include a 30 percent cost savings on our energy bills and will increase the efficiency of our testing services by providing a more consistent light to our young seedlings.

"We use the special lighting in our germination testing chambers for our new and upcoming products before



Computer generated images of a multilayer design built around something similar to a flower transport cart (4' x 2' shelves).



they go on sale so that we can reliably inform the growers of how many seeds will successfully turn into the premium product which we are known for. Using this new system will also mean that the seedlings require less watering because they will not dry out as quickly."

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## Service with a Smile

Gay Smith

Thank you, Quinton Tschetter! Your Bulletin Board message in the marketing thread about buying a farm and writing a business plan gave me the inspiration for this article.

In case you missed it, here's what Quinton said (slightly modified): "As with any business there are keys to success, and three principles apply. 1. Quality: there is NO substitute. 2. Service: ditto. 3. Marketing: if the first two are maintained, then the key to success or failure is that intangible thing called marketing. Find a niche. Selling yourself as a reliable, quality commodity makes buyers WANT to support you.

stated and implied needs....Why do we try to do the right thing right, on time, every time? To build and sustain relationships....The focus of continuous improvement is, likewise, the building and sustaining of relationships. It would be difficult to find a realistic definition of quality that did not have, implicit within the definition, a fundamental express or implied focus of building and sustaining relationships." Richard E. Winder and Daniel K. Judd.

It is tough for consumers to quantify flower quality. They usually don't know the different flower types and have no idea of what to expect. People need to

category. And worse, they lump flowers from all sources into one big melting pot.

A commodity attitude is obvious when you look at consumer surveys which repeatedly indicate that Joe-Bob thinks flowers last an average of 2-3 days. If selling directly to consumers, you have a terrific opportunity to build a sustaining relationship by including longevity information in signage, sleeves and invoices, all of which helps dispel convoluted perceptions. Another stepping stone to building a sustaining relationship with customers is to provide flower food with purchases. Consider it a nickel insurance policy. There is lots of research proving that blooms in flower food last 50% longer than flowers in tap water. Existing supermarket consumer guarantee programs denote 5-, 7-, 10- and 14-day guarantee categories, depending on flower type. This concept is not new. Potted plant growers use similar messages indicating "sun lover" or "shade preferred" on pot tags. Everyone wants to be an expert and today's consumer is hungry for information. Today's consumer is interested to learn how to care for flowers and wants to know how long they will last.

Service is Quinton's second point in which he emphatically states there is no substitute for good service. When selling to wholesalers, a few points to remember will ramp up the service quotient tenfold. Ask your buyer the best time to catch him or her and then try to stick with it. Buyers are time-crazed so be prepared before you call or email. Provide the quantity available of each product. Give a few details to support asking price, including stem count per bunch, stem length per

We industry geeks know lilies last longer than tulips, but the general public lumps all flowers into one big category. And worse, they lump flowers from all sources into one big melting pot.

Sell happiness, fulfillment, contentment, hope—all those things that the public is looking for, especially in time of economic downturns.

Well said, Quinton!

The concept of quality is ubiquitous in all aspects of production, starting with variety selection to postharvest treatments. It's an important aspect of display aesthetics, too. I took a quick Google look at definitions for quality and found one entry that grabbed my attention. "Quality is the ongoing process of building and sustaining relationships by assessing, anticipating, and fulfilling

experience firsthand the performance and longevity of your goods before buying into your story. Therefore it is important to provide details: tell and show them what steps are included in handling practices at your farm to ensure top quality blooms. One idea is to promote a consumer guarantee. Not just a general product guarantee, but a focused program in which you categorize different flowers into groups corresponding to number of vase days consumers can expect at home. Of course, we industry geeks know lilies last longer than tulips, but the general public lumps all flowers into one big

grade and bud count per stem (lilies). Everything you do to make it easy for them to buy your products makes you more valuable. Write legibly on invoices, and label bunches that are not common. Product ID is important because the buyer makes a price list for sales staff. If salespeople do not know what your cool product is or what to call it, it does not get mentioned in their call.

Remember that 90% of wholesale sales are via phone, not walk-in. Retailers cannot reorder if they don't know the name of the product. Flower identification is critical when orders are pulled. There is a huge price difference between Matsumoto asters from Colombia and China asters from an ASCFG grower, but chances are both will be listed as "aster" on the price and pick sheet.

Finally, Quinton reminds us about the magic of marketing. Marketing is everything and anything that tickles consumers' desire, making them want to buy your product. Don't be ashamed to remind customers of the many benefits flowers bring into our lives. Quinton reminds us we are selling happiness, fulfillment, contentment and, of course, beauty! Check out [www.aboutflowers.com](http://www.aboutflowers.com) for a variety of marketing ideas to use as a springboard for signage, sales ideas, workshop topics, etc.

Marketing is not all fluff and glam: scientific studies conducted at Harvard, Rutgers and Texas A&M prove flowers and plants positively affect our attitudes when they appear in the workplace, home and community living centers.

Another source of information on marketing ideas is the presentation Kate Sparks gave at the 2011 Growers' School. It features lots of variety information, beautiful photos and a resource list. Find the link on the ASCFG web site and on the Bulletin Board.

Welcoming in the New Year is a good time to evaluate where we've been and where we are going. Are you satisfied with the standards



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| ABC 1-3 White      | ABC 2-3 Lavender   |                    |



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you have in place to measure quality? If you were your own customer, would you be happy with the service offered? Think about clever marketing ideas that grabbed your attention in the past few months. How can you integrate them into your business to strengthen your niche? A new season deserves a new outlook.

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## Dormant Greenhouse - A Good Time to Clean Up

Stanton Gill

Winter is here and for most cut flower growers it the time of year to plan the 2012 season. Those of you who shut down your greenhouse or hoop house in December need to clean up and prepare this winter to prevent insect and disease problems before you start spring crops.

If you are overwintering cool-season plants such as sweet pea, snapdragon, or pansies in minimally heated houses, you will need to monitor them in March and April. Female aphids may be settled in on these crops and will start cranking out nymphs when temperatures warm. Make sure you control them early in the season before they spread onto your new spring plants.

If you heat your greenhouses, two-spotted spider mite populations can blossom in the low humidity, especially on plants growing on the south and southwest sides of the structure. This is most common February through April.

If you're starting the spring with empty greenhouses or hoop houses, you have the best chance to get a jump on insect and diseases by walking through a general cleanup process. Otherwise, you'll be too busy when spring arrives to get back to this task.

### Can You Start Clean and Stay Clean?

- After each cropping cycle take the time to completely clean the greenhouse of all plant material and growing medium, debris, and weeds. This removes harborage for insect and mite pests, and diseases. Use a power washer on benches and floor surfaces. After all plants have been removed from the greenhouse use a leaf blower to either blow out or vacuum leaf debris. Although a rapid cleaning method, this may result in dust covering the inside surface of the greenhouse glazing, which will have to be removed in order to avoid a reduction in light transmission.
- Remove all weeds from inside and outside the greenhouse, particularly near sidewalls, doorways, and intake vents. Fabric weed barrier makes an efficient reduction method. Although weeds may germinate through the weed fabric, they can be easily pulled and discarded. In an organic greenhouse you can plan on hand weeding and physical removal of weeds as part of your routine. If you have concrete floors weed control is a breeze.
- Avoid leaving residual plant material from the previous cropping cycle in the greenhouse. Keep in mind that the longer plants remain in the greenhouse the greater the probability of having to contend with pests. Residue from old plants can serve as a reservoir for insects, mites and diseases that may spread to the new material.
- Clean or disinfect all walkways and greenhouse benches with Green Shield or dilute solutions of Clorox (Clorox brand is the only sodium hypochlorite with an EPA disinfectant label). Hydrogen dioxide and hydrogen peroxide generally are approved for use in greenhouses.
- Eliminate all algae from the greenhouse. Algae can build up on floors and benches, and serves as a food source for fungus gnats and shoreflies. Quickly deal with low spots or poorly-drained areas in the greenhouse that allow water to accumulate. Avoid over-fertilizing plants with nitrogen-based fertilizers.
- Routinely check horizontal airflow fans (HAF) to make sure they are functioning properly. These work by distributing the air mass throughout the greenhouse, useful in maintaining even temperatures within the space, improving air circulation, and reducing the incidence of *Botrytis*.
- Winter is a good time to calibrate soluble salt and pH meters. Calibrate fertilizer injectors at least once during the growing season, and test irrigation water for pH and alkalinity. With organic fertilizers you will need to establish the correct setting on your injector but you can measure soluble salt levels and pH just as you would with chemical fertilizers.
- Order yellow sticky cards. If possible, establish thresholds for insect and mite pests so that appropriate pest management strategies may be implemented. There is no general threshold number for pests above which they may occur. Experience will be helpful in establishing thresholds for specific crops. Thresholds will vary depending on the insect pest and whether this pest vectors diseases.
- Take stock of what pesticides you have on hand and decide which materials will be used if you detect a pest during the season.

The final step is to hope for a warm spring and pray for nice weather from April through Mother's Day to help weekend sales.

# Pesticide Mixtures

Raymond Cloyd

A pesticide mixture is the combination of two or more pesticides, such as an insecticide and/or miticide, into a single spray solution. These combinations expose individuals in an arthropod (insect and/or mite) pest population to each pesticide simultaneously. Pesticide mixtures may be more effective against certain life stages including eggs, larvae, nymphs, and adults of arthropod pests than individual applications, although this may vary depending on the rates used and formulation of the chemicals used.

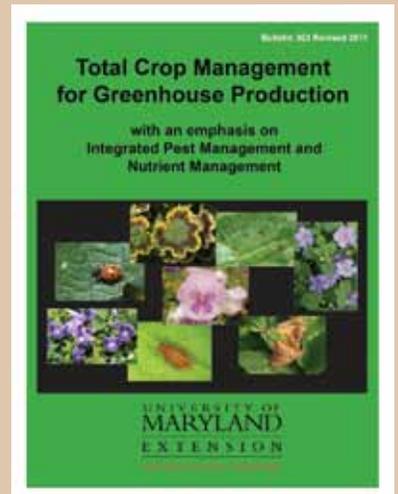
There is already widespread use of this practice, partly because combinations of selective pesticides may be required in order to deal with the arthropod pest population complex present in the crop. Typically, two pesticides are mixed; however, it has been demonstrated that three or more pesticides may be combined into a spray solution to target different insect and/or mite pests. This article discusses the benefits and potential problems associated with these combinations and how they may alleviate resistance.

## Benefits of Pesticide Mixtures

Pesticide mixtures may enhance arthropod pest population suppression as a result of synergistic interaction or potentiation between or among combined chemicals. Synergism refers to the toxicity of a given pesticide being enhanced by the addition of a less or non-toxic pesticide, or other compound such as a synergist (e.g., piperonyl butoxide), which is used to increase the effectiveness of an insecticide application. Potentiation involves an increased toxic effect on arthropods, when two compounds are mixed, which by themselves are harmful to these pests.

The main benefit of mixing pesticides is a reduction in the number of applications required, which decreases labor costs. Further, mixes may result in higher mortality than if either pesticide were applied separately. Studies have demonstrated that these mixes increase efficacy against pests such as whiteflies, and western flower thrips (*Frankliniella occidentalis*) compared to separate applications of each pesticide.

Many studies have evaluated the effects of pesticide mixtures in suppressing populations of agricultural pests, whereas there is minimal information associated with horticultural cropping systems including cut flowers. However, it has been demonstrated that all two-, three-, and four-way combinations of abamectin (Avid), bifenazate (Floramite), azadirachtin (Azatin), and imidacloprid (Marathon) along with spinosad (Conserve) did not affect suppression (based on percent mortality) of western flower thrips.



A new book is available from the University of Maryland Extension: *Total Crop Management for Greenhouse Production – With an Emphasis on IPM and Nutrient Management.*

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This indicates that antagonism is not an issue with any of these mixtures. It was also found that nearly all the two- and three-way combinations associated with acetamiprid (TriStar), bifenthrin (Floramite), buprofezin (Talus), and chlorfenapyr (Pylon) exhibited no antagonistic activity with nearly all the blends efficacious (based on percent mortality) against populations of the sweet potato whitefly B-biotype (*Bemisia tabaci*) and the two-spotted spider mite (*Tetranychus urticae*).

### Potential Problems with Pesticide Mixtures

Along with benefits, potential problems must be considered. These include plant injury (phytotoxicity), pesticide incompatibility, and antagonism. Antagonism occurs when the mixture of two or more pesticides results in reduced efficacy (based on percent mortality) compared to separate applications of each, or when the combined toxicity of two materials applied together is less than the sum of the toxicities of the materials applied separately. As such, antagonism may compromise the efficacy of insecticides and/or miticides.

Incompatibility is a physical condition in which pesticides do not mix properly to form a homogenous solution or suspension. Instead, flakes, crystals, or oily clumps form, or there is noticeable separation. Incompatibility may be affiliated with chemical and/or physical properties of the pesticides, impurities in the water, or the types of formulations being combined. To determine incompatibility (or compatibility) of a mixture, a 'jar test' should be conducted in which a representative sample of a pesticide mixture solution is collected in a glass jar and allowed to remain stationary for approximately 15 minutes. If the solution is uniform or homogenous, the pesticides are compatible; however, if there is clumping or separation, the pesticides are not compatible.

### Pesticide Mixtures and Resistance

It has been proposed that pesticide mixtures may delay the onset of resistance developing in arthropod pest populations. Implementing pesticide resistance management strategies is important in preserving the effectiveness of available pesticides. However, minimal evidence suggests that pesticide mixtures may actually alleviate the onset of resistance.

Mixing pesticides with different modes of action may delay resistance developing within pest populations because the mechanism(s) required to resist each pesticide in the mixture may not be widespread or exist in those populations. As such, it may be difficult for individual pests to develop resistance to several modes of action simultaneously. Those arthropods resistant to one or more pesticides would likely succumb to the other chemical in the mixture as long as pesticides with different modes of action are mixed.

As such, it is important to combine only pesticides with different modes of action or those that affect different biochemical processes in order to prevent resistance. For example, acephate (Orthene) and methiocarb (Mesuro) should not be mixed because despite being in different chemical classes (organophosphate and carbamate) both have identical modes of action.

Acephate and methiocarb block the action of acetylcholinesterase, an enzyme that deactivates acetylcholine, which is responsible for activating acetylcholine receptors. This then allows nerve signals to migrate through the central nervous system. Both acephate and methiocarb inhibit the action of acetylcholinesterase by attaching to the enzyme. Similarly, although the active ingredients of the miticides acequinocyl (Shuttle), pyridaben (Sanmite), and fenpyroximate (Akari) are in different chemical classes; naphthoquinone, pyridazinone, and phenoxy pyrazole, respectively all three are classified as mitochondrial electron transport inhibitors (METI). These active ingredients either inhibit nicotinamide adenine dinucleotide hydride (NADH)

dehydrogenase (complex I) associated with electron transport, acting on the NADH CoQ reductase, or bind to the quinone oxidizing (Qo) center or cytochrome bc1 (complex III) of the mitochondria respiratory pathway. This reduces energy production by preventing the formation of adenosine triphosphate or ATP. As such, these designated miticides should never be mixed.

### Summary

Pesticide mixtures involve combinations of two or more pesticides into a single spray solution. These are widely used to deal with the array of arthropod pests encountered in cut flower production systems due to a savings in labor costs. Their use may result in synergism or potentiation (enhanced efficacy) and alleviate the potential for resistance.

However, antagonism (reduction in efficacy) may also occur due to mixing two (or more) pesticides. Judicious use of pesticide mixtures or those that may be integrated with biological control agents or natural enemies is especially important because parasitoids and predators (and even microbials such as beneficial bacteria and fungi) can suppress arthropod pest populations irrespective of the presence of resistant individuals. The use of mixtures to prevent or avoid resistance must not divert attention from implementing alternative pest management strategies including cultural, sanitation, and biological control that can reduce reliance on pesticide mixtures and minimize the potential for pesticide resistance. Pesticide mixtures will continue to be an integral component of pest management programs due to the continual need to deal with a multitude of arthropod pests associated with horticultural cropping systems.

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## Using Flowers to Attract Beneficial Insects in Field Crops

Megan Bame

Researchers at the University of California are investigating the use of interplanting agronomic food crops with harvestable floral crops, including cut flowers and herbs. The purpose of these plantings is to provide nectar and pollen to promote the establishment of beneficial insect populations that will control pests on the food crop. This project specifically looked at the population of hoverflies, a highly effective predator of aphids.

There are several considerations for selecting a suitable flowering species. For example, flowering plants vary widely in their attractiveness to beneficial insects, so screening may be necessary to determine whether a flower species and an insect

species are compatible. Also, the flowering plant will ideally bloom early enough in the crop cycle to attract natural enemies before pest damage occurs on the agronomic crop.

The agronomic crop for this study was kale, while the floral species were: sweet alyssum, buckwheat, tansy phacelia, wild mustard, wild arugula, Thai basil, white borage, cosmos and nasturtium. Sweet alyssum, buckwheat and tansy phacelia are commonly-used insectary plants. Wild mustard, wild arugula and Thai basil are edible herbs, and white borage, cosmos and nasturtium have value as cut flowers. The criteria for selection were:

- Annual growth cycle and fast growth
- Ability to start from seed
- General hardiness
- Tolerance of full sun
- High level of flower production
- Marketability of the harvestable floral species

After observing insect populations (pest and beneficial) on the kale and the floral species, this study found sweet alyssum to be the superior attractant for hoverflies. Sweet alyssum also bloomed early and continuously. Herbs may not be a viable “harvestable floral crop” since most are not marketable if allowed to flower and the stems become woody at flowering. The cut flowers would need to be harvested at bud stage or young flower, therefore not maximizing the support of beneficial insects. However, harvesting some, not all, of the cut flowers could be a mutually beneficial solution. Testing more species, including some perennials, and planting combinations of floral crops were identified as areas for further research.

*Hogg, B.N., R.L. Bugg, K.M. Daane. 2011. Attractiveness of common insectary and harvestable floral resources to beneficial insects, Biological Control, pp. 76-84.*



Hover fly adult - courtesy of Suzanne Klick

## Hot Water Treatment for Asiatic Lilies

Leaf yellowing in Asiatic lilies can limit the vase life of harvested stems. Some methods used to avoid leaf yellowing include hormone-based foliar sprays and pretreatment with 1-MCP. This research, conducted in New Zealand, looked at the use of postharvest hot water treatments (HWTs) as an alternative non-chemical means to prevent leaf yellowing in Asiatic lilies.

The study concluded that postharvest HWT can delay leaf yellowing and decrease incidence and severity of leaf senescence in Asiatic lilies. The optimal treatment protocol tested was between 50C (122F) for 5 minutes and 52C (125.6F) for 2.5 minutes. Using the right combination of temperature and time was an important factor to avoid heat damage such as pitting of the leaf surface. Dipping the flowers buds resulted in abnormal flower opening. Vase life was increased by 3 days for stems treated with a hot water dip. The only cultivars evaluated were 'Elite' and 'Cordelia', therefore, further evaluation of additional cultivars was recommended for further research.



Photo courtesy of Ko Klaver

Woolf, A.B., S. Combes, M. Petley, S.R. Olsson, M. Wohlers, R.C. Jackman. 2012. *Hot water treatments reduce leaf yellowing and extend vase life of Asiatic hybrid lilies*, *Postharvest Biology and Technology*, pp. 9-18.

## Controlling Corm Rot and Vascular Wilt in Gladiolus with Rhizobacterial Mix

Corm rot and vascular wilt of gladiolus cause substantial yield loss to the long-duration gladiolus crop. Quality and quantity of spikes and corms are reduced by these diseases. Control of *Fusarium oxysporum* f. sp. *gladioli*, which causes corm rot and vascular wilt, has not been fully successful using current practices. Biocontrol using plant growth promoting rhizobacteria (PGPR) is a possible alternative disease management approach. This study looked at the

biocontrol efficacy and plant growth promoting activity of carrier based formulation under green-house and field conditions.

The research demonstrated that application of a talc-based formulation of a PGPR strain mixture as corm dressing and soil application reduced the incidence of corm rot and vascular wilt of gladiolus. The

strain mixture also improved corm and cormel production and promoted flowering.

The study concluded that development of stable formulations of biocontrol agents will be important for gladiolus production where soil rotation is limited and fungicide use is avoided or unaffordable. The talc-based formulation of the rhizobacterial strain mixture used in this experiment has potential application in an integrated disease management program.

Shanmugam, V., N. Kanoujia, M. Singh, S. Singh, R. Prasad. 2011. *Biocontrol of vascular wilt and corm rot of gladiolus caused by Fusarium oxysporum f. sp. gladioli using plant growth promoting rhizobacterial mixture*. *Crop Protection*, pp. 807-813.



Photo courtesy of Ko Klaver

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## Jen Syme, Jen's Bouquets, Syme Family Farm Broad Brook, Connecticut

Megan Bame

Jen Syme and her husband, Bill, at the University of Connecticut where they were both horticulture students. It was Bill who actually started the family business in 1984. As an FFA student in high school, he grew and sold fall chrysanthemums. Once his project commitment had been fulfilled, he continued to grow the chrysanthemum business, ultimately paying his way through college. The couple has been diversifying the business in the past ten years growing potted herbs, vegetables, cut flowers and most recently Christmas trees.

The cut flower aspect of the business, Jen's Bouquets, began in 2006 when Jen decided to stay home with their children, Emily, 10, and Becca, 7. Prior to that, Jen worked for a wholesale florist, and later, a retail florist gaining valuable experience she's put to use on the farm. Before becoming a cut flower farmer, Jen did a lot of research and considered what she "didn't want to do." For example, she knew she didn't want to be "a driver." She has around 40 members in her eight-week subscription program, the Cut Flower Club. Rather than Jen

delivering bouquets all day, members must pick up from the farm each Wednesday. While Jen has the bouquets prepared, the girls can handle the distribution if Jen needs to be back in the field.

In addition to the subscription program (an outlet for flowers mid-week), the family attends two weekend farmers' markets. Jen says, "Our family all plays a part in the business. Our daughters enjoy coming to farmers' markets with me. They are able to wrap bouquets for the customers and make change. I pretty much handle the planning of crops, planting, harvesting, etc., while Bill is a great help for the big projects like building greenhouses, laying down landscape fabric, making wholesale deliveries of mums and attending the Sunday market every week."

The Symes are in the midst of a construction project this winter. With financial assistance from a Natural Resources Conservation Service (NRCS) grant, they are erecting a 26' x 72' high tunnel. Jen anticipates being ready to utilize it this spring. One crop she hopes will benefit from the high tunnel



is lisianthus. She expects the diffuse light to result in longer stems, improving the quality of the flowers.

They grow mostly traditional field flowers including zinnias, sunflowers, snapdragons, rudbeckias, lisianthus and dianthus. The mix changes each year, numbering around two dozen varieties. Jen enjoys reading about the ASCFG Trials and learning from other growers what to avoid and what might be worth trying. She especially enjoys learning from others experiences by reading and participating in the Bulletin Board.

Jen is sure to offer multiple price points to satisfy every budget. Custom bouquets are available in small, medium and large (\$15 to \$40), and the subscription choices are traditional or premium (a \$30 difference over the course of the program). At the market all her arrangements are displayed in mason jars and she typically offers two price points. For a low-price, impulse purchase, she also offers a three-stem bunch of sunflowers every week.

One of their winter projects two years ago was to develop a web site. Not only does it provide beautiful photos and information about each aspect of the diverse farm, it offers customers the opportunity to pay online (using PayPal) or order flowers for pickup at one of the farmers' markets. Jen has been pleased with the response to the site, but says, "Getting your name out there and being recognized is a real challenge to growing a small business—especially on a limited budget."

Word of mouth is one of the best advertising tools and it has led to the development of another niche market for cut flower sales. This past year, folks began ordering table centerpieces for bridal showers and parties. Jen's not particularly interested in doing weddings, but these smaller events help expose more people to her flowers and are relatively easy to prepare since they typically call for multiples of the same arrangement.

Another potential benefit of developing an events aspect of the business is that social functions typically



Jen shares this story: "This past fall, the governor of Connecticut, Dannel Malloy, was visiting the Hillstead Farmers Market in Farmington and saw our mums. His wife took one of our business cards and the next day his office called the farm. They came out and chose a truck full of mums to decorate the governor's mansion in Hartford. This was quite an honor for us."

The take-away is this: you never know your next customer may be. Always have business cards and marketing materials available and keep your display neat and fresh.

occur rain or shine. Growers can agree that weather is a wild card in even the best-laid production plans, but with a narrow market season (June to October), weather can drastically affect sales as well. Jen recalls that Sunday is usually their biggest sales day, but this past August it rained (or there was a hurricane) three out of four Sundays in August. Despite that, sales have increased each year since they started growing cuts five years ago.



After growing on leased property for many years, they purchased an eight-acre farm in 2010. Currently cut flowers occupy less than a half-acre of intensive cultivation so they have room to grow more flowers and continue growing the family business.

## NORTHEAST

### Missy Bahret

Old Friends Farm

grow@oldfriendsfarm.com



I know this is a growers' association but I just can't help myself from writing more about the business of growing.

We too often fall prey to only growing the crops without due attention to the business parts. As a result, we experience poor financial returns, overworked schedules and a bad case of "farmers' amnesia", that creeps in and makes us remember each year in a eschewed way that makes us keep doing the same things year after year with minimal changes.

Luckily, we Northeast growers have WINTER to help us regroup and recalibrate, as well as Seasonal Affective Disorder (allowing ample introspection time), Minimal Daylength (which helps prioritize outdoor and indoor

tools help growers grow. Even in the dead of winter, at 17 below, and under 20 inches of snow, without batteries. Wow!

### Common Traps Growers Fall Prey To

- 🐛 Letting your business manage you.
- 🐛 Being too busy to think about what you are doing.
- 🐛 Doing the same thing over and over.
- 🐛 Using a crisis management approach.
- 🐛 Never saying no.

### Helpful Techniques to Avoid the Common Traps

Minimal approaches are provided (for the flurries), as well as more in-depth approaches (for the huge Nor'easters).

**Manage Your Business.** Plan your future. If you have a chance, watch the YouTube: Honda - Dream the Impossible. Think ahead, and you'll be surprised how much comes true. Let it happen to you, and you'll be dismayed at how many times you are looking at the eight ball.

Minimally: Grab a pen and go to a diner, get a cup of coffee and a stack of

Ultimately: Take the time to make a full business plan. Chip away at it and you will always find that it gives you a valuable perspective for your enterprise. Include short-and long-term financials, as well as short- and long-term business goals. Dare yourself to be a future thinker.

**Employ Your Noodle.** Do what you are good at, and hire out what you aren't good at. If you feel skilled at the business aspects but can't find time to do those tasks, rearrange who does what. Make sure you are doing the \$40 per hour work and hiring out the \$9 per hour work. And if you aren't the person to be doing the business-thinker jobs, hire someone. This might look like an office keeper, an accountant, a marketer, a harvester, a designer - it could make a world of difference!

The first time we looked into tax prep service the fee seemed too expensive to justify. So, for years we trudged blindly through the forms, racking up hours of stress and misallocated skills, just to end up with mistakes and more work filling out forms. Then we got smart and hired out and were pleased to save more than

ever (even after the prep fees were paid!) A sure case of selecting the right person for the right job. Do you really have to do it all?

Minimally: Make a list of the skills each person has that is associated with your business, including

yourself. Remember to include each person's interests as well. Although those are areas that may need training, their enthusiasm and stamina for those tasks may be quite valuable. Refer to these skill sets when creating job descriptions and delegating tasks.

Ultimately: Be sure that you are regularly taking time to give your brain

Your brain is an amazing resource, full of many seasons of experience - use it!

tasks), Poor Circulation (due to cold temperatures causing contemplative time in front of the wood stove), and Isolation Issues (which lend themselves to ample research and ASCFG Bulletin Board time), to name a few of the (free!) apps you can use to your benefit. (Bust a move, smarty phone—these download straight to the core of the grower!) These

napkins. Label each napkin with a month of the year, and write out what tasks and crops happen each month. Add any big projects to the given month you want them to happen in. The big picture now is in front of you; this is what you are going to do, not what is going to happen to you.

some undivided work time. Check in with your business plan, your financials, assess your crop production, give your workers feedback, and take notes throughout the season. If it works best for you to be away from the farm or studio to do this, then arrange that! If you need a deadline to make a brain-hour happen, then tell your crew you will be giving them a farm report at the end of the day. Your brain is an amazing resource, full of many seasons of experience - use it!

**Change.** “If it ain’t broke, don’t fix it.” While that’s a decent mantra, remember that it is good to change things to make them work even better.

Minimally: Back to those napkins with your crop overview on them. Order another cup of joe and put a star next to each crop or task that you feel you do well. Put an arrow next to things that you could (or want to) do better. This has now turned into a homework list of topics you need to research as to how to get better at it. You might feel alone at times (and heck, you have been sitting alone at the diner for hours now), but you aren’t alone when it comes to growing production innovation. Scour the ASCFG Bulletin Board, visit other farms and studios, go to conferences, meetings and trade shows. Reps can be an endless source of really valuable information - call them!

Ultimately: Implement a feedback loop system for each crop, and/or each crop system.

Stay abreast on new technology, ask questions, use your resources, implement annual changes on your farm that support your short- and long-term personal and business goals. Allocate professional development for all employees and owners.

**Shift Your Approach.** Be on offense instead of defense. Sure there will always be things that come up that you will need to adapt to, fix, or manage, but for all the rest of the time you can be ready. This year we encouraged our crew to frequently ask of themselves “Where am I in 15 minutes?” to help

speed up transitions on our transition-heavy diversified farm. One day I overheard my husband asking another crew member how she seemed to do that so well. She replied with a smile “I’m 16 minutes ahead.”

Minimally: Recognize when you (and others) are at your most effective state. Try to correlate appropriate jobs and tasks with that timing.

Ultimately: Using the time management quadrant tool developed by Stephan Covey (*First Things First, The Seven Habits of Highly Effective People*), focus your time and energy on the Important/Not Urgent block. Try to project what might come up in the Important/Urgent block and take steps to curb them. Manage against focus on the Not Important/Not Urgent block. This matrix can be especially helpful when prioritizing lists.

	URGENT	NOT URGENT
IMPORTANT	CRISIS	PLANNED
NOT IMPORTANT	OUT OF CONTROL	TRIVIAL

**Just Say No.** (I’m talking about crops here.) This is a basic concept: Do what you can afford to do and stop doing what you can’t afford to do. You need to grow what makes sense (and cents) for your skills, market, land, and interests.

Minimally: Back to your napkins and another cup of coffee. Put a line through any crop that your gut says is not financially profitable. Go through each one and weigh the costs and the gains associated with it. Remember not to take it personally. If you are feeling emotional about those flowers that just aren’t cutting it, get another napkin, label it “A Few Plants Just For Me” and list the crossed-off flowers there. You can still have a love for a certain flower

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and not grow it for production. Voila! Now you have a more profitable crop composition!

Ultimately: Time-track your crops, look at that analysis, and use the findings to decide what to expand and what to terminate. I can’t speak more highly of this endeavor and I also can’t rightly say that it is easy to do. It takes time, diligence and a massive spreadsheet to record all the ins and outs of a given crop, but it is the only way you can get the most accurate analysis of what you are making on the crop. This is an excellent job to delegate to an employee. We use reminder flags for our time track crops (we track only a few a year) which we clip to the seed packet in the winter, and then it travels with the crop for its entire life (to the flat, to the field, reminding us to track every cultivation, harvest and eventually, the clean up and turning in). This reminds us that if we are doing anything with this crop, we need to write down the time spent, task and quantity (of harvest).

Give yourself a pat on the back, and give your waitress a really good tip; after all, your farm will be earning more money next year! (Not to mention that you tied up her table and used more napkins and coffee than the price of your bill.)

Order up! Wishing you a winter full of positive reflection and change, and a bottomless cup of diner napkins.

# MID-ATLANTIC

## Becky Devlin

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I am still reflecting on the National Conference as I write this, but it's already time to think about plans for the upcoming season as well as the Mid-Atlantic Regional Meeting. The Conference was jam-packed with great information as well as great growers from all over the country. It was especially nice to connect with others who share the same passion (and the same obstacles) for growing cut flowers.

In looking forward, what I really want to know now is: what do you want to know, learn, do? What would help you the most in being more successful as a cut flower grower? I had many ideas during the Conference (and my drive home!) that I see a possible need for. For example, the concept of combining orders so that those of us that order some items in small quantities can pool our orders together and take advantage of large order discounts, or offset high minimums, or maybe just try a little of something new. Perhaps this could be part of our Regional Meeting. Another thought was to have a series of panel discussions throughout the day, in which several growers discuss and answer questions on 3-4 pressing issues we all face, or want to know more about.

Then there is the question of when and where to have it... where do our Mid-Atlantic folks want to go and during

what month? I am really hoping to do something out-of-the-box this year. So, here's what I am asking:

- What are your most pressing concerns as a cut flower grower?
- What are your biggest day-to-day challenges?
- What new (or new to you) cut flower do you want to start growing or grow better?
- What skills or procedures would you like to learn?
- Do you have any interest in pooling orders for seed, plugs, plants or even supplies? If so, what?
- Where and when would be ideal for you to attend a Regional Meeting?
- Do you have any out-of-the-box ideas to share for a Regional Meeting?

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I am asking any and all of you (whether you are in the Mid-Atlantic Region or not) to shoot me an email and give me your feedback and input. Give me a shout at [beckydevlin@cox.net](mailto:beckydevlin@cox.net) as soon as possible...I look forward to hearing from you all!

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## SOUTHEAST

### Charles Hendrick

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The National Conference in Reston was a great experience for me both as Regional Director to the Board, and as a grower. There were many good speakers and meaningful topics covered. My report this quarter is a summary of information I learned from various speakers.

Alicain Carlson, (who also presented at our Southeastern Regional Meeting in August), of North Carolina State University explained how to grow eucomis as a cut. Eucomis, also called pineapple lily, flowers the first year from bulbs. The most promising cultivars are 'Sparkling Burgundy', 'Tugela Jade', and 'Tagela Ruby Pink'. These are very interesting cuts, with an amazing vase life of up to 50 days. The larger the bulb, the more flowers are produced, which are best cut when  $\frac{3}{4}$  of florets are open. I am planning to try eucomis in the spring as a new cut to offer my florists, who will hopefully love this unusual flower.

Polly Hutchinson of Robin Hollow Farm in Saunderstown, Rhode Island (and our new ASCFG President) gave an inspiring and motivational presentation on the topic of fall sales. She reminded me of the importance of good sound record-keeping through the use of a seeding calendar. The seeding calendar is used to keep track of succession planting dates, days to crop maturity, etc. This way, we can know when we need to

plant that next row of sunflowers when it's that busy time of year and we forgot when we last planted. The calendar will help us to go back and reflect on what worked and what didn't, and then make improvements.

Another important message stressed by Polly was to plant one succession planting that you are sure won't make it....but, then....what if it does? Extra money in your pocket that wasn't expected.

Another conference highlight was the tour of Dave Dowling's Farmhouse Flowers & Plants, located in a beautiful and picturesque location. I was very surprised to see anemones and sunflowers grown in lily bulb crates. I think I'm going to give this a try. After all, it was Dave who introduced me to growing lilies in crates. Dave also grows callas in 6" pots instead of crates, which he said cuts down on disease.

Here in South Carolina, eucalyptus trees are grown outside and typically overwinter fine unless the plant is young and small. So I was surprised to see eucalyptus grown in the hoop house, which gave Tim Mills (Floral & Hardy Farm, Lexington, South Carolina) and me a good laugh. Then, I was amazed at Dave's huge hydrangeas with dried uncut flower heads as large as soccer balls. Next year, call me, Dave, and I'll sell those for you!

Traditionally, the highlight of the conference for many is the opportunity to informally meet and visit, at meal times or break times, to talk with fellow growers from all over the country. This allows the sharing of our collective experiences – good and bad, and gaining insight on how other growers grow and how we can improve. The wisdom gained through these informal talks is endless. I learned some new varieties to grow, special varieties of snaps, how to get better deals on seeds and bulbs, etc. I enjoyed hearing other growers' techniques, new approaches to seed germination, and realized I might need to change some bad habits with more tried and true techniques that seasoned growers use. This sums up the conference

for me: folks helping each other to be better growers of amazing cut flowers.

On a personal note, many thanks to Tim and Donna Mills for letting me hitch a ride back to South Carolina with them, and for patiently answering my thousand or so questions.

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## MIDWEST

### Kent Miles

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First I would like to thank the membership for this opportunity to serve as the Midwest Regional Director.

My introduction to flowers began in high school. We had a horticulture class which was mostly made up of kids who grew up on a farm, i.e. beans and corn. We had a small greenhouse measuring approximately 15x25 feet. In class, I learned how to take cuttings, and pot up hanging baskets and 4" geranium plants. These simple tasks began my love for plants.

Following college, in 1980 I became employed as a designer in a retail florist shop. While working in retail, some of the positions were as a designer, manager of branch store, and then later as a shop owner. Over the years, I have worked in small towns to large cities, including Chicago and New Orleans.

After purchasing my first house, I planted drumstick allium and liatris in my garden. While working for a retailer, I developed a working relationship with the wholesalers from whom we bought flowers. I sent them some of my samples of the allium and liatris. They loved it! So, while selling to the shop I worked at, I also started selling to one of the wholesalers. The following year I increased production of the amount of the same flowers in order to meet the demand. My thoughts were to grow flowers that I, as a designer, wanted to

work with. After doing this for a few years, my backyard was running out room. So I decided to look for a parcel of land to do the growing on a larger scale.

I found a piece of ground outside of Champaign-Urbana, Illinois. I basically bought a cornfield located a short distance from three interstates, and the University of Illinois. Urbana has a farmers' market called Market at the Square, which made an additional outlet to sell my flowers.

Starting to work the parcel of land filled with cornstalks at first seemed an overwhelming task. My neighbor, a traditional grain farmer, brought in a stalk-chopper and cleared the whole property. The home was soon up, and by the spring of 1998, I was plotting out the first flower beds for the annuals.

I met an old friend at Star Valley that day; Michael Morrison was one of the speakers. We caught up on what we were up to, and I let him know that I was growing flowers. He wanted to know what varieties I was growing. At this time, Michael was a fresh flower buyer for a wholesale house on the north side of Chicago. I told him we were growing the basics: sunflowers, celosia, ageratum, and white liatris. As a buyer he was interested in purchasing local product, especially the white liatris. He said that he would buy it from the west coast, but with the shipping it generally came in with brown on it. So my local product would be great.

In our area, we are flat and surrounded by corn and beans. We service wholesalers in Chicago and

flowers is given to every new customer. Our bouquets come with a flower food packet, and are then wrapped in purple tissue. The wrapping of the tissue paper makes our bouquets stand out when the customer is still shopping for their fruits and vegetables. We offer a flower card to our market customers; basically it's a form of a punch card. It has 12 punches and your 13th bouquet is free. Over the years the number of customers using the punch card continues to increase. I myself use punch cards at other merchant that I patronize. I feel the punch card helps build customer loyalty, while earning my customers free product.

Market at the Square, in peak season, has between and 130-150 vendors per Saturday. Out of all the participating vendors, only myself and another grower sell strictly cut flowers. There are produce vendors who sell a handful of flowers also, but produce is their main commodity. They tend to be experts in regards to produce, but lack the knowledge required to properly grow and maintain quality flowers.

Illinois Willows sells mixed bouquets and solid bunches. Until a few years ago, our competition sold only solid bunches. They are now doing mixed bouquets too. The market manager has had inquiries from consumers regarding flower vendors participating in the Saturday market. She has told them that we have a couple of flower vendors..... one specializes in the 'basics', and the other (Illinois Willows) offers the unique and unusual product. Our unique product varies from artichoke foliage and chocolate cosmos to 20-foot stems of curly willow.

In addition to providing the consumer education regarding flower care and flower food packet, we also offer a 7-day unconditional guarantee. There have been many occasions when a customer who had frequently purchased from the other fresh flower vendor decided to try Illinois Willow product. We have been told that the other vendor's product didn't last very long—that is where customer education comes into play. We educate the consumer on how achieve a



At the time, I had an off-the-farm job as a fresh flower salesman at a local wholesale florist. Reading a trade publication, I saw an advertisement for an ASCFG Regional Meeting held in Wisconsin at Star Valley. I attended the meeting and that was my first introduction to the wonderful organization we belong to.

central Illinois. My relationships with the wholesalers started when I was in retail. Having continued a good working relationship with wholesalers is very important to our business. Just as at farmers' markets, building a relationship with our customers is an ongoing process. Education on caring and handling of our

long-lasting bouquet, getting full value and enjoyment from their purchase.

Currently, Illinois Willows has 1-1½ acres in cut flowers, and 3½ acres in woodies. This year we will be dropping some non-profitable 'dogs', and adding some new varieties that have been in our cut flower trials. We have the consumer and wholesalers requesting particular product. We are changing some of our cut flower growing choices to meet the demand of our customers.

In the last two years, social networking via [www.facebook.com/illinoiswillows](http://www.facebook.com/illinoiswillows), and [Twitter@MrWillows](https://twitter.com/MrWillows) have increased our presence both locally and internationally. Locally, we have had inquiries from consumers on social networking sights that later led to them purchasing our product. Internationally, we have gotten inquiries about our farm and how we grow our product in the Midwest that differs from growing techniques in England, Russia, and Serbia, to name a few. Facebook allows us to post photographs of product availability, product for the farmers' market, and design techniques using our product. The reason we use Twitter is to put out short bursts of information. We use Twitter on Saturday morning at the farmers' market informing our followers what the hot products are that day, and what we are running specials on. Twitter also allows us to post pictures of flowers featured at the market that day. We also maintain a website ([illinoiswillows.com](http://illinoiswillows.com)) to further promote our product. Social networking has proven to be very beneficial to the growth of Illinois Willows because it is instant information given to the consumer.

After being in the flower industry in various capacities, I have found my passion lies in marketing and growing. Hearing the consumer say how much enjoyment they have gotten out of our flowers is one of the main reasons that I do what I do.

In closing, I am looking forward to serving in my position with the ASCFG. I am excited to meet and connect with fellow growers both in person, and via emails and social networking sites.

Spring is soon upon us. What areas are you going to concentrate most on?

- New varieties?
- Fertilization/Irrigation?
- Weed/Pest Control?
- Social Networking?
- Consumer relations?
- Expansion?
- Subscriptions?

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## SOUTH-CENTRAL

### Rita Anders

Cuts of Color  
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I will be your new Regional Director, replacing Josie Crowson who did a wonderful job, and I hope I can do as good of a job as she did. I've had the opportunity to meet a lot of our regional members and if I haven't, one day I hope too. Please feel free to email me at [ritajanders@cvctx.com](mailto:ritajanders@cvctx.com) if you have any questions or I can be of any assistance to you. If I don't have the answer, maybe I can point you in the right direction. My goal as your Director is to build a close-knit group of growers to help each other. Facebook is a great way of communicating with each other and seeing how other growers in all regions produce and market their flowers is a great benefit.

As everyone reading this article knows, Texas and Oklahoma have had the worst drought in history and getting through last summer was a challenge for every grower. Kim Haven of Billabong Fresh Flower Farm reports having a good year because she chose not to grow during the drought. Vicki Stamback says her expenses were up last year mainly due to the huge water bills because of the drought, and says her year was worse. Irrigation and deer fencing seemed to be of importance to all. Kim Martin and Laurie Bostic of Barking Cat Farm

report the same problems with deer and drought. They are concentrating on better water sources and a good irrigation system.

My head is still on overload from an amazing National Conference. There were so many great motivational and informative speakers that rejuvenated us to start a new growing season. My season for the New Year is usually marked by the planting of the ranunculus and anemones which are our first flowers to bloom. We have ours in the ground and they are coming up nicely. This year they won't be eaten off at the ground because we put in a deer-proof fence.

We visited Bob Wollam's greenhouses where he grows a lot of eucomis. It had already frozen but he said it will all be coming back next year and he is really excited about this crop. Vicki Stamback tried eucomis last year also. She planted it in bulb crates in the summer but moved it to the field where she thinks it will do much better. Linda McCall tried it this past year also but with little success and thinks it was mainly due to the heat and lots of wind.

I tried gomphocarpus (hairy balls) and my customers at the farmers' market loved them. They were quite the conversation. So many customers would stop by just to ask what they were and some bought bouquets just because I had a stem of the gomphocarpus in them. I had one of my customers buy two arrangements for church and I said "Oh my, don't tell your pastor what those are." She had to come tell me that they were a hit even in church. She said people would walk up front and just have to know what those fuzzy balls were. Linda McCall also grew hairy balls and says they were successful for her with her florists. Last year at Vicki's was the first time I had seen them and I just had to grow them because of how interesting they were. I have to say they were very drought tolerant and the deer didn't like them which make them a winner for me.

Vicki also is excited about grape hyacinths and regular hyacinths, and likes a new ornamental pepper series called Rio. She'll be growing them this year.



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A lot of the buzz at the Conference was how we can be more profitable, time efficient and how can we let florists, buyers and customers know we exist? I just finished reading *The Organic Farmer's Business Handbook*, which goes into great detail about being more profitable and efficient. The book is about vegetables but relates to flowers when keeping records of everything you do and spend regarding a crop.

Start thinking about what you would like to hear about at our summer Regional Meeting, which will be held at Nancy Bartlett's Blue Stem Farm in Folsom, Louisiana. She has graciously accepted to host the meeting; we'll let you know when the date has been determined. Nancy had a good year in 2011 year despite the drought, which was not as bad as what we had in Texas. She will be increasing her production because she can't keep up with her demand. Nancy reports that her best crop was her 'Cramers' Amazon' celosia. She sold it in bouquets and bunches. Nancy's wedding work has also increased from last year and she is very excited about that.

By the time you are reading this article, the New Year will be upon us and what better time to start some new habits that will make us more efficient thus making us more profitable and put more money in our pocket? Black Friday sales were reportedly up by 26 percent, which is good sign that the economy might be getting better, and wouldn't that be nice?



**Christof Bernau**

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Seasonal transitions: a semi-constant state in the realm of floriculture, but here in Santa Cruz, production is definitely on the wane as our version of winter gradually sets in. We have had our first light

frost of the season, but nothing like the killing frosts that most of you experience in other flower growing regions. On the production side, here in mid December we still have marigolds, tithonia, bells of Ireland, mignonette, nigella, larkspur, calendula and stock blooming outside. Overall, flower quality and yield is generally low at this time of year. Stock and mignonette, however, seem to be at their happiest overwintering here in Santa Cruz.

In late spring and early summer, we are lucky if we get 15" tall mignonette and 20" stock. Both plants grow well but with increasing temperatures and day-length, they simply do not produce long and strong stems. Winter is a different story completely. Perhaps because they are

stretching for the low-angled sunlight and because they grow relatively slowly, we get long and strong mignonette and stock stems at this time of year. The mignonette typically will be 20-24" between now and late March and, with reduced pollinator flight, it holds on the plant much longer than in the main season. Our overwintered stock is also a dramatic improvement over summer-grown stems. October and November succession plantings yield vibrant, fragrant, stout and long-holding

stems that regularly exceed 24" and like their mignonette counterpart, they hold in the field well for a week or more once they begin to open.

On a more challenging note, my entire collection of dahlia tubers, 600 row feet of huge clumps, has been dug and is now feeding some very lucky pigs. Perhaps this is going to be the latest culinary rage: pasture-raised, organic pigs finished on dahlia tubers and oak acorns, coming to the finest restaurants near you soon. Sadly, we seem to have invited some dahlia mosaic virus to come join our plantings two years ago and since that time the virus has spread to virtually every plant. Like most viruses, dahlia mosaic virus has three principal means of introduction onto your farm. The first and most likely is from planting out already infected tubers or cuttings. Another common vector is pest insects such as aphids and thrips. Finally, tissue injury is a common mechanism for the spread of DMV. Tissue injury can easily occur via mechanical weed cultivation, hand cultivation, staking, netting, and of course, during harvest. Harvest injury, which happens every time we cut stems, is

quest for food. The only real difference is that we may be able to prevent the spread of DMV by first harvesting our clean plants and then moving to the infected plants, followed by a thorough cleaning of our harvesting equipment with dish soap or rubbing alcohol.

However, from experience, I can tell you that this is a flawed strategy. Once you have DMV, short of destroying your plants or feeding them to a friend's pigs, there is no way to eradicate the virus. Really, it is just a matter of time before you or your crew inadvertently spread the virus or insects do the job for you. Thus, early recognition, proper identification and roguing of contaminated plants are essential to prevent the spread of this disease.

Like most viruses, DMV symptoms appear as spotting, mottling, vein clearing, necrosis, chlorosis, leaf distortions, shortened internodes, stunted growth and reduced flower production. Dahlia cultivars show some variation in their expression of symptoms and some varieties can be asymptomatic, beyond reduced plant vigor and stem production.

You can use online photos to identify infected plants. I would start with two

Perhaps this is going to be the latest culinary rage: pasture-raised, organic pigs finished on dahlia tubers and oak acorns, coming to the finest restaurants near you soon.

inevitable, but the spread of DMV during harvest is a matter of human agency.

Whenever we harvest from infected plants, we contaminate our tools with the virus. If we then harvest from "clean" plants with "dirty" tools, we become the vector by introducing DMV to the exposed tissue and vascular system of the previously uninfected plants. Essentially, we are doing the exact same thing as rasping and sucking insects like aphids and thrips as they move indiscriminately from plant to plant in a

by Dr. Hanu Pappu, a plant pathologist from Washington State University: <http://plantpath.wsu.edu/pdf/Binder11.pdf> and [http://www.dahlia.org/uploads/bulletin\\_articles/ADS-DMV\\_Symptoms\\_Slides.pdf](http://www.dahlia.org/uploads/bulletin_articles/ADS-DMV_Symptoms_Slides.pdf). If you see any symptoms similar to those in the photos, immediately send tissue samples to your cooperative extension plant pathology lab and ask them to test specifically for dahlia mosaic virus. Until the lab confirms or eliminates the possibility of DMV, institute a very deliberate harvest

pattern, harvesting potentially infected plants only after you have harvested plants that show no signs of DMV.

While dahlias are susceptible to several other viruses, DMV seems to have the greatest potential to impact plant productivity and thus, your bottom line. As a result of my lack of vigilance and early intervention, I am spending nearly \$1000 to restart our dahlia program, replacing 600 row feet of giant tuber clusters with 1-2 tubers per hole for the 2012 season.

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## NORTHWEST

### **Diane Szukovathy**

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#### SWGMC Progress Report

At this time last year, the Seattle Wholesale Growers Market was still just an embryo, a developing idea. Now our market is eight months old and in many ways mirrors the growth and development of a young farm. Many experienced farmers will agree that you can get only so far on paper and then you just have to jump in, figure it out and adjust as you go. Basically, pull on your boots as you run out the door. Never mind the socks but do watch where you put your feet!

At this point, SWGMC is a twenty-member growers' cooperative, a mixed bag of marbles. Although of diverse backgrounds, climates, crops and growing practices, we started with a basic common need: survival and growth of our farms. We recognized the shared benefit of working together to direct market our products. This summer, our board of directors developed the following umbrella vision statement to describe our goals: Cultivating a Northwest floral industry that values and supports local growers.

We learned last summer that yes, Seattle's wholesale floral buyers would quickly and wholeheartedly embrace us—recognizing our commitment to quality and finding common ground in our passion for all things that photosynthesize, many enjoying the direct connection to growers and to other florists through the marketplace hub. There's nothing like being in there pulling together to get a deeper understanding of shared common ground, farmer to farmer, farmer to florist, florist to florist and beyond. I can clearly see that our young market provides opportunities for quality and caring business connections, preservation of resources, and collaboration.

Many times this past year, we growers pooled our resources to satisfy larger orders. Members who were present at market became comfortable working together to supply customers, be that the need for an extra twenty bunches of red dahlias or the necessity of getting a joint order of product delivered across town. We are now taking advantage of the winter months to coordinate our crops, ensuring less overlap and better supply for our customers, naturally finding and growing our niches.

Not all of our members were able to be there in person at the market, particularly our members from farther away, and that has presented some nuts and bolts challenges. For example, the benefits of direct marketing tend to be diminished when a grower needs to pay for transportation and for another party to sell for them; it generally takes longer to get product to market, and the grower loses the benefit of developing direct personal relationships with customers. However, the main challenge as I see it has been a loss of opportunity to forge bonds with those distant members and to benefit from everyone's personal contributions and vision in the market's development. Potential solutions include telling the stories of all our farmers through web site development and market display, and inviting long-distance members to supply signage and materials to better promote themselves. Additionally we need to develop ways

for members to be involved in our growth and development without being physically present at the market.

As a non-profit entity, our cooperative is governed by a nine-member board of directors—seven grower members and two industry floral representatives. Until early October when we hired a part-time front desk manager, no one has been paid for his or her work in starting and running this business. We are lucky that we have an incredibly hard-working, “get ‘er done”, and supportive core. All of us are running farms, keeping our businesses healthy and taking care of personal lives. We've been challenged just to hammer out the basics, like making sure we have viable bylaws, keeping the bank balance in the black and getting our fresh sheet out every week. As president and leader of our efforts I am at once awed by the generosity of our core members and aware of our shortcomings in communicating with members who have been less involved in our daily process.

If given a chance to start over, I would definitely require more constant involvement from all members, not just the board of directors. Our search for new members has focused on growing practices and what supply of products our market might gain. We require members to pay in a technically refundable one-time fee of \$500. Beyond that, members pay based on selling product either through stall rental or front desk sales. But our market is still an infant with a few core members making great sacrifices of time and resources to keep things running and plan future growth steps. This winter our board will consider requiring a minimum number of volunteer hours or an equivalent monetary contribution per year from all member growers. I believe this will help communicate the cooperative concept and help all of us to more equitably share the hard work of getting started and to jointly appreciate this miraculous venture we are growing. Additionally, starting in 2012, we plan to initiate a nominal buyer's card fee, inviting our customers to share in the investment of developing our market and helping to generate revenue for day-to-day operations.

In assessing our successes, the community hub aspect of our cooperative has been very nourishing and beneficial. Florists, other organizations, press, foodies and all number of community partners share our commitment to local agriculture, botanical diversity and heritage, sustainability and keeping dollars near to home. In just a few short months, some fruits of these community partnerships include:

- The California Cut Flower Commission recognized us as a non-profit organization with shared interests for national lobbying to benefit domestic cut flower farmers. Through letter-writing campaigns and other efforts we worked together this past summer for trade adjustments to the Colombia Free Trade Agreement. While our efforts did not bear immediate results, we made contact with influential Washington State legislators and got some great press including a front page article in the *Puget Sound Business Journal*.

We also paved the way for future collaboration with the CCFC and other advocates for U.S. flower growers.

- Author and photographer team Debra Prinzing and David Perry continue to promote us at every turn. They connected us to the national PBS show *Growing a Greener World*. In October an episode entitled “Flower Power” aired nationally and featured local flower farmers and the Seattle Wholesale Growers Market. Great press! If you haven’t already seen it, you can check it out at the following link: <http://www.growingagreenerworld.com/episode217/>.
- Debra and David’s book, *The 50 Mile Bouquet*, now has a publishing date of April, 2012. It romances the reader with the irresistible allure of buying seasonal, local flowers and supporting local flower farmers. These folks tell our story in a way we never could. As well as featuring a number of our members, their book contains an entire chapter on the Seattle Wholesale Growers Market.
- Through the ASCFG, a number of grower groups around the country are examining our cooperative model and considering similar ventures. Some of these folks, such as Fair Field Flowers in Wisconsin, are already organized and have shared valuable developmental information with us. Others are in formation mode, eager for information on how our model is working. This is exciting stuff. It confirms for me that collaborative marketing is the way of the future for many small and medium sized growers and that we can problem solve together on a larger scale.
- Many of the bigger challenges our young market faces involve start-up resources. Most of our core, founding members are seasonal field growers, but our lease is year-round and we are committed to staying open through all of the seasons. Now, in winter as I write this, our customer base has



Diane Szukovathy and Melissa Feveyear being filmed for PBS’ *Growing a Greener World*

thinned and the market offerings reflect the sparseness of the season. A few of our growers are supplying woody materials including every color, shape and texture of twig imaginable, greenhouse roses, wreaths, winter berries, greens, fabricated structures for the holidays and some potted plants. We growers are scheming and planting for season extension so the market can be better supplied next winter. I have no doubt we will make it through this winter and start back gangbusters next spring, but this is when grant funding to help patch us through the start-up process would be helpful.

- We applied for 2011 Washington and Oregon Specialty Crop Block Grant Funding particularly for the purpose of bridging some of our start-up expenses, made it well through the competitive process but ultimately were not funded. This year we will be applying again with better focus and a track record of start-up success. I am in many ways glad we were not funded this first year because it has allowed us time to forge bonds and overcome obstacles on a smaller scale. Still, trial by fire does get a little old, speaking from experience.
- Looking ahead to this spring, we are excited about our potential opportunities for growth. We intend to take advantage of the growing “buy local” movement which is particularly active in the Seattle area. Already we have been approached by and are building relationships with several local-oriented grocery chains. Our florist customer base continues to grow and we are working to help promote businesses which support us. In our first year we have seen phenomenal growth in a short amount of time and we expect this trend to continue.

## The ASCFG Welcomes its Newest Members

**Vanessa Campbell**

Full Sun Farm, Leicester, NC

**Everett Chu**

Azusa Farm and Gardens, Mount Vernon, WA

**Becki Conner**

Green Trail Flower Farm, La Porte, IN

**Molly Culver**

High School for Public Service Youth Farm, Brooklyn, NY

**Christin Deener**

Federal Point Farm, Carolina Beach, NC

**Mickey Depesa**

Johnny's Selected Seeds, Winslow, ME

**Melissa DeSa**

Forage Farm, Gainesville, FL

**Kathy Dudley**

The Bloomery, Butler, PA

**Sudie Elder**

Blackstone, VA

**Rocky Ferrell**

Verde Valley Flower Farm, Tucson, AZ

**Jane Henderson**

Commonwealth Farms, Concord, NC

**Brandon Kirkland**

Epic Flowers.Com, Talent, OR

**Meredith Kope**

Singing Frog Farm, Leesburg, VA

**Bonnie Kunkle**

Sweet Annie's Garden, Bedford, PA

**Vicki Lander**

Flower Hill Farm, Beaufort, MO

**Lisa Lloyd**

Azusa Farm and Gardens, Mount Vernon, WA

**Nan McKay**

Milton Hershey School Horticulture Center, Hershey, PA

**Isaac Nir**

Genesis Seeds Ltd., Rehovot, Israel

**Cindy and Kimber Noyes**

Noyes Flowers and Greenhouses, Caribou, ME

**Marla Palmiter**

Palmiter's Garden Nursery, Avon, NY

**Steven Poppe**

Univ. of Minn. Research Center, Morris, MN

**Allison Smith**

Hunny Bunny Honey and Flowers, Helotes, TX

**Bradley Smith**

Samish Heirlooms Farm, Sedro Wooley, WA

**Louise Standish**

McGrath, AK

**Harlan Taylor**

H.D. Floral, Courtland, Ontario

**Mary Turner**

Greenwood Farm, Columbia, VA

**Ted Van Essendelft**

Pantego Blossoms, Pantego, NC

**Nick J.J. Warmerdam**

Flora Farms, Ltd., Abbotsford, British Columbia

**Michael Wells**

365 Fresh, Rochester, NY

**Kathleen Zeren**

Kathleen Zeren Landscape Design, Phippsburg, ME

## ASCFG Research Foundation News



### Funds Raised for Cut Flower Research

Thanks to generous donors and bidders, a tireless auctioneer, and the return of a missing icon, the ASCFG Research Foundation raised more than \$11,000 at the 2011 National Conference in Reston, Virginia. Auctioneer Dave Dowling kept the bidding at the live auction sharp and lively, often offering to throw in a personal twenty dollars to up the ante. Thank you to everyone who donated materials, and those who made bids. Special thanks to returning member Nick Warmerdam for his unique contribution.

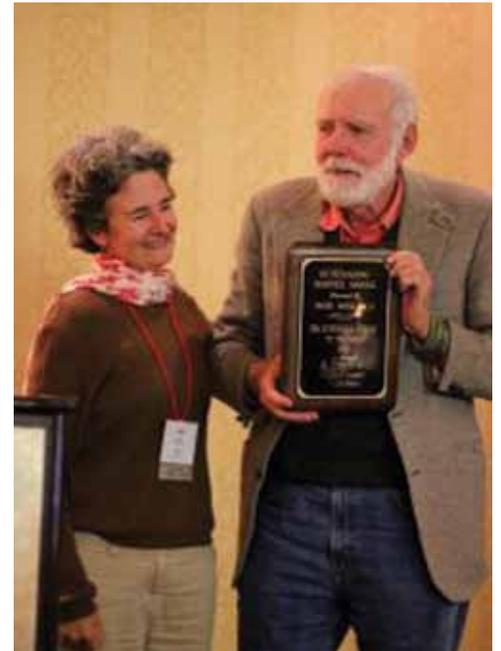
# 2011 Outstanding Service Award

At the 2011 National Conference in Reston, Virginia, long-time member Bob Wollam was presented the ASCFG's Outstanding Service Award by Vice-president Leah Cook.

He grows a wide range of cut flowers in northern Virginia, selling at farmers' markets in the Washington, D.C. area, and to florists, and wedding and event planners. His specialties are dahlias and hydrangeas, and he is a great supporter of the Temptress poppy series. Bob's been an ASCFG member since 1994, and has attended every National Conference since then. He's been to about twenty Regional Meetings – he's one of the rare members

who goes to Meetings outside his Region – and has hosted three on his own farm.

Bob has long been known for his generous and enthusiastic interaction with anyone who steps foot. He's the epitome of an ASCFG member: he's always looking for new stuff to grow, he loves plants, he tries new methods of production, he's environmentally minded, but most of all he LOVES to share what he has learned. Good or bad, mistake or success – he is always willing to invite people to his farm, to lead them through his hoopouses and across his fields, and even invite them to stay for dinner at the farmhouse, and probably overnight.



## Letter to the Editor

A hydrangea by another name is still a gorgeous cut flower!!

The article "What's New with Hydrangea?" by Juergen Steininger, in the last issue of *The Cut Flower Quarterly*, was of considerable interest to this hydrangea grower. The excellent cultural directions in the last half of the article, though aimed at the pot hydrangea growers, provide a lot of food for thought for those who field grow cut hydrangeas and want to improve their production methods.



What puzzles me is the name "Hortensia" that seems to be a synonym for Hydrangea. Is this a new marketing gimmick or another case of plant scientists renaming plants? You would think that after the hundreds of years botanists and plant scientists have been identifying plant species they would one day get it right. A Google search for "hortensia" brings up all kinds of interesting things—Alpaca wool knits, diamonds and even self-catering apartments in Madeira, Portugal—which have nothing to do with hydrangeas. In the plant department Google found *Rudbeckia laciniata* hortensia and climbing hortensia defined as *Hydrangea petiolaris*.

The best discussion I have discovered on Hydrangea vs. Hortensia is in the Encyclopedia of Hydrangeas by C.J. and D.M. Van Gelderen, a father-son team of woody plant growers in the Netherlands. They divide *Hydrangea macrophylla* into two groups: Hortensia Group for the mophead and Lacecap Group for the lacecaps. This delineation makes some sense, but it would seem that plant scientists (botanists) could have devised a naming convention to define these two

very different flower types of *Hydrangea macrophylla*. It is very awkward to say or write *H. macrophylla* (Hortensia Group) 'Alpen Glow' or *H. macrophylla* (Lacecap Group) 'Blue Lace'. By this definition, *H. petiolaris*, mentioned above, would more properly be called by a common name of "Climbing Lacecap."

Almost all of our customers order blue, or purple or white hydrangeas (not hortensia). Spanish-speaking customers would likely use "hortensia" as my Mexican friends tell me is the Spanish equivalent of hydrangea. Perhaps there is a need for redefining cut hydrangeas, or, if you prefer, hortensia.

It would seem that Steininger is using hortensia to be those hydrangeas whose color can be manipulated i.e., pink/blue. But again it appears the newer patented varieties are being marketed as hortensia. If hortensia is used as the term for cut hydrangeas, then what do we call pot or landscape hydrangeas?

When is a hydrangea not a hydrangea?

Don Mitchell  
Flora Pacifica

# Have you updated your member page?

## ASCFG Member and Flower Search

Our new online flower search serves several purposes. Replacing the printed Buyers' Guide, it will allow flower buyers to easily find growers and their products. Growers can quickly locate suppliers of plant materials, greenhouse and field equipment, and much more. Floral designers are listed along with their services such as weddings, funerals, bouquet subscriptions or deliveries.

Best of all, you'll be able to modify your Member Page any time, as often as you'd like, with only a few clicks. No need to wait for a membership renewal, or Buyers' Guide mailing. If you change your email address or create an online show of your wedding designs, you can immediately update your ASCFG profile. Each member's page will list contact information, links to web sites and social networking pages, online photo albums, and price lists. As in the Buyers' Guide, growers' distribution ranges will be included. A photo of your farm provides a snapshot of your company to buyers.

Since many of you are not only growers, but also designers, the ability to be listed in more than one category is available. If you are a grower who also provides design or retail services, list yourself in the "Designer" section as well. If you supply plant material or equipment, check the "Supplier" box. Within those sections, be sure to indicate which services and supplies you provide. Remember to click "Preview and Save" at the end of each section.

This site will boost the search power of your own web site, as the ASCFG Flower Search will be promoted to buyers across the country. As more members update their information on the site, it will become even more useful to growers and those looking for their products.

The more complete and accurate each member's information is, the more useful the site will be to the entire organization. Please take a few minutes to visit your member page and update the information already there. The process is simple:

- Go to [www.ascfg.org](http://www.ascfg.org) and log in to Members Only. If you can't remember your login information, write Judy at [ascfg@oberlin.net](mailto:ascfg@oberlin.net)
- Click "Edit Member Page". This will take you to your "ASCFG Member Page".
- Go through each section, adding new or changing existing information. Remember to click "Preview and Save" in each section.
- Under "Description of Business", please see "All Members: Click here to update your Business Type". This is where you may list yourself in any of the four categories. If you add another Type, be sure to then update your list in that category.
- Upload a photo or image to add a personal touch to your Member Page. If you cannot resize your image to upload correctly, please email it to [ascfg@oberlin.net](mailto:ascfg@oberlin.net) and it will be resized and uploaded for you.



**ASCFG Member Only Login**

Username:

Password:



### Sample Member Pages

**The Cut Flower Experts!**

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**Bare Mountain Farm**  
Tony & Denise Stead

20011 Bare Mountain Lane  
Shaw, OR  
(503) 259-1220  
(503) 259-0174 cell  
[ascfg@baremountainfarm.com](mailto:ascfg@baremountainfarm.com)  
[www.baremountainfarm.com](http://www.baremountainfarm.com)  
Twitter: [@baremountainfarm](#)

We grow, using sustainable practices, a broad variety of seasonal cut flowers in Oregon's Willamette Valley. We grow mixed and precise wedding/event floral services. We also wholesale bulk flowers to florists and designers. Our flowers are fully grown. Our season begins in late March with orchids, tulips and other early season flowers and ends in late October with dahlias, gerberas and other seasonal annuals. For more information visit us on Facebook.

**Distributions:**

- Local Supplier

**Market Status:**  
[Available Online](#) [Private](#)

**The Cut Flower Experts!**

---

**BeeHaven Farm**  
Paula Rice

2401 West Bridge Road  
Browns Ferry, GA  
(706) 207-1990  
(706) 207-0827 fax  
(706) 207-0441 cell  
[ascfg@beehavenfarm.com](mailto:ascfg@beehavenfarm.com)  
[www.beehavenfarm.com](http://www.beehavenfarm.com)

Selling specialty cut flowers to local and area markets through farmers' markets, on-farm sales, and florists who seek direct, freshest, quality and sustainable. We especially love providing wedding flowers for destination brides and have several services so that every budget can be met. Wedding and event options.

**Distributions:**

- Regional Delivery
- Local Supplier

**Flowers We Grow**

**Services We Offer**

- Agapanth
- Events
- Agapanth
- Funerals
- Anemone
- Weddings

**The Cut Flower Experts!**

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**Seabrook Farm**  
LARRY VAN

22043 Keesler Rd Richard Road  
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(601) 573-3823  
(601) 573-3822 fax  
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[www.seabrookfarm.com](http://www.seabrookfarm.com)  
Facebook: [SeabrookFarm](#)

Element of tradition. Specialty, fresh cut flowers, herbs, poms and bouquets. We harvest and grow our own organic, local florals and designers and provide quality, sustainable flowers for pick up at our farm. We also flower delivery for special needs and occasions. This service is an average. Direct to customer, florists, bakeries, markets in environmentally local, sustainable, Social Media.

**Distributions:**

- Local Supplier

# 2012 Cut Flowers of the Year



FRESH  
Zinnia 'Queen Red Lime'



WOODY  
Viburnum 'Wentworth'



BULB  
Lily 'Royal Sunset'

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www.jellomoldfarm.com

## Comparison of Cover Crops for Aisle Weed Suppression in Black Plastic Growing Systems

Michelle Elston

Roots Cut Flower Farm, Carlisle, Pennsylvania

On the land I rent two miles from my farm, I grow all my annuals on black plastic. Although I have qualms about all the plastic, it is the best way I can grow a large amount of flowers with minimum weeding, the soil is warmed quickly in the spring, and my flowers are kept clean of soil splashing. The one-acre plot is plowed each spring and I hire a neighboring farmer with a mulch layer to lay the plastic with drip tape underneath. Everything looks incredible until about June, when the weeds strike!

We have tried various methods of weed control: rototilling aisles, mowing weeds, string-trimming weeds, hoeing close to plastic edges. Because I grow with minimal chemical input, herbicide on the aisles is not an option for me. The worst weed in my field is crabgrass, which loves the heat of late summer. Once established in the aisles, it tends to creep over the edges of the plastic. And since it grows very low to the ground, it can produce viable seed below my mowing height...my problem keeps getting worse!

This land is also heavy clay with low organic matter content. I began to wonder if I could kill two birds with one stone by planting cover crops in the aisles, to both out-compete the crabgrass and to improve the organic matter content of my soil. Ideally, a quick to germinate, but low-growing cover crop would not allow the crabgrass to germinate, and stay low enough to minimize aisle mowing.

To test this, we planted three different cover crops and a plain weed control using the following method:

1. Land was plowed and twelve 350-foot rows of black plastic were laid on May 14, 2011.
2. On May 26, we lightly rototilled all 12 rows (to disturb any weeds that had germinated), and we planted our cover crops. We used a push-style drop spreader to seed 3 rows each of the following: oats (*Avena sativa*), summer alfalfa (*Medicago sativa*), and white clover (*Trifolium repens*). Each crop was seeded at its appropriate rate. For the 3 control plots of weeds, we did nothing after the tilling.
3. We also took soil samples of each of the four test plots, making a representative sample compiled of 15 cores from each three row plot. These samples were sent to Penn State for analysis.
4. That night, we had a severe hailstorm which flooded my field and shot holes through the plastic.
5. On May 28, we reseeded the oats. Surprisingly, the smaller alfalfa and clover seeds did not wash away. Enough had already started to germinate that we decided not to overseed these rows.
6. On June 23, we push-mowed the aisles for the first time, mowing the alfalfa, clover and weed plots. The oats were still low and did not need mowing.
7. We continued to mow as needed (when weeds/crops were 8-12" tall) and recorded each mowing date, time spent mowing, and any observations.
8. At the end of the season, we again took representative soil samples of the test plots and sent them to Penn State for analysis.



## Maintenance and Mowing Results

All plots required 6-7 mowings from June 23-September 1. Mowing the 12 aisles took about 1½ hours each time (or at least the times when my mower was running properly!). We did end up hoeing or weeding the edges of almost all rows of plastic sometime throughout the season; the crabgrass that had germinated was creeping onto the plastic. This was especially problematic for direct-seeded crops that were small enough to be sensitive to the crowding and, conversely, were not big enough to shade out the crabgrass.

Initially, the oats germinated quickly and evenly, requiring one less early-season mowing than the other crops. The oats seemed to crowd out all early weed seeds and they did not grow as quickly as the early weeds (mostly hairy galinsoga). The oats died out by late July, but weeds did not germinate at this point, and the soil was somewhat bare for the month of August.

The white clover was slow to establish, but made a very nice carpet by the end of the season. (We actually left this in the ground to continue over the winter.) Once established, it did outcompete the weeds and created a low carpet. The clover stayed low enough that we were able to skip the final mowing on September 1. On a side note, the creeping clover did root through the edges of the black plastic. This made my most hated job of lifting out the plastic even more difficult than normal.

Annual alfalfa grew tall in mid-summer but seemed to die out later. Crabgrass was very thick in the alfalfa rows in late summer. The alfalfa established slowly, allowing the weeds to germinate, and then died early allowing the weeds to overtake.

The control weed plots were comprised largely of crabgrass with some hairy galinsoga mixed in.

Crop	Number of mowings	Notes
Oats	6	Did not mow first mowing, second also thin
Clover	6	Did not mow last mowing
Annual alfalfa	7	Very tall and thick midsummer
Weeds	7	

## Soil Improvement Results

In addition to decreasing time spent mowing aisles, we hoped to increase organic matter via cover crops. Soil was sampled May 26 and October 11. Results are below.

Crop	Starting % Organic Matter	Ending % Organic Matter	Change
Oats	2.7	3.4	+0.7
Clover	2.7	2.9	+0.2
Annual alfalfa	2.3	2.7	+0.4
Weeds	2.8	2.5	-0.3

Oats most significantly increased organic matter. This may be due to early biomass production and subsequent breakdown over late summer months. This surprised me because these aisles were more bare than the others from August-September. The same reasoning can be applied to the alfalfa. Clover provided the least significant increase in organic matter, however, if tests were taken again in spring after plowing, results may be different.

## Conclusion

Oats planted in aisles give good suppression of early weed seed germination. As long as soil is not disturbed after this, few weeds germinate late summer, even after oats have died out. The oats also most significantly improved soil organic matter content. Oats appear to be the best (and cheapest) crop to plant in aisles.

White clover is also slow to germinate but spreads nicely and prevents weeds from becoming aggressive. In long seasons, it may be more effective in eliminating the need to mow late summer through fall. This may be a viable option for multiple-year plastic or permanent aisle systems.

Summer alfalfa is slow to germinate but does provide a good biomass. It dies down midsummer and the already germinated crabgrass takes over. I would not recommend using this unless biomass is the only goal.

Because this is a low-organic matter soil, and leaving it bare/allowing weeds to grow actually depleted the organic matter further, I would recommend planting a crop in the aisles for soil health. In addition, any weed suppression will decrease weed seed populations for subsequent years. All cover crops required the same or fewer number of mowings as the weed control, and all cover crops increased organic matter content. Although all crops gave better results than the control, oats were the best choice and the one I'll be using next year.

Judy Laushman

Although it seems it's been only a few weeks since the last issue of this magazine was published, the fact that it's actually been three months is significant. In that interim, we have been kept busy with several projects, and are happy to see them come to fruition.

You'll see subtle changes in the look of *The Cut Flower Quarterly*, some slight differences in the header styles and color themes. We like to keep the style of the magazine fresh without making it seem unfamiliar. The new look continues the simplicity of the graphics.

*The Insider's Guide to Cut Flower Dahlias* is the result of Vicki Stamback's wish to see production information published by the ASCFG. It's the first in what we hope will be a series of booklets covering specific cut flower crops. The 32-page softcover is available for sale from the ASCFG now, with plans to investigate electronic publishing of it and future publications. Many thanks to Lane Greer, and to her contributors, for making the book so relevant to our growers.

Several members have favorably commented on the redesign of the web site. The new layout is streamlined and condenses several of the previously existing pages. The beauty of the format is that it can easily be modified as the Association evolves to meet its members' needs.

Here is another reminder, along with the one on page 78, to update your own Member Page within the ASCFG's main site. These individual setups provide your company a general introduction to flower buyers and other growers, before guiding them directly to your own personal web site. Many of you have

already personalized your Member Page with photos, logos and other graphics. Those with online photo albums or price lists are able to link directly to them. It takes just a few minutes to enter the information you'd like to include.

As you pore over the reports for the ASCFG Seed, Perennial and Woody Plant Trials, please keep in the mind the many people who made these important projects possible: representatives of seed breeders and distributors, the ASCFG staff, the patient and cooperative postal workers in Oberlin, trialers who make room for the plants being evaluated and spend extra time record keeping, and John Dole and his group at NCSU who make sense of it all. It's a complex process, which, for the 2011 Seed

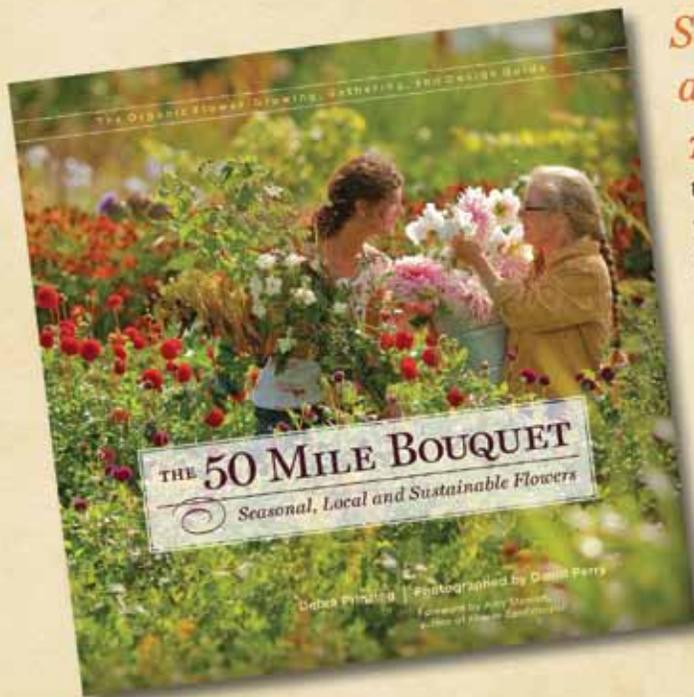
Trials, began in October of 2010, and culminated in January of 2012 with this publication. In between, the 2012 Trials were set in motion.

These reports are the only grower-generated evaluations of new cut flower varieties, and their value cannot be underestimated.

At the same time, plans for both the National Conference in Tacoma, and Regional Meetings across the country are already moving ahead. The theme for the 2012 Conference is "Co-opetition", and it's sure to be unlike any other meeting the ASCFG has hosted. Regional Meetings have been scheduled for Massachusetts and Texas, and are likely to be held in the Midwest as well. Keep an eye on the web site for details.



# The Word is Out...



*Seasonal, local, sustainable flowers are in — and they smell wonderful!*

*The 50 Mile Bouquet* is the first book to spotlight the “slow flower” movement – the dramatic transformation in how cut flowers are grown, designed and used. With in-depth reporting and breathtaking color photography, this visually elegant book takes us into the fields and studios to meet the dedicated farmers and designers at the forefront.

***The 50 Mile Bouquet***

By Debra Prinzing Photography by David Perry

Foreword by Amy Stewart,

author of *Flower Confidential*

ISBN-13: 978-0-9832726-4-9

\$17.95 US/\$19.95 CAN

144 pages, full-color, hardcover

Available in April, 2012



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*Normal bouquet*



*Mono bouquet*  
*July-on-pot*



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

*Double flower*  
*No pollen*  
*Very long vase life*

