



Top: Ornamental pepper 'Cappa Topfruit White/Red'  
Above: Matthiola 'Katz Light Lavender'  
Right: Eustoma 'Wonderous Light Brown'

# New Cuts for Hoop Houses

This year's Association of Specialty Cut Flower Growers trials highlighted promising, head-turning cultivars. These winning varieties generally perform better in hoop houses.

By John Dole

Hoop houses and cool greenhouses have become increasingly important to specialty cut flower growers. For field cut flower growers, hoop house production extends the production season and protects cut flowers from rain and wind damage. Lisianthus, stock, kale and snapdragons, in particular, do very well in hoop houses or greenhouses, usually producing much taller stems than in the field. We confirmed that fact in the Association of Specialty Cut Flower Growers (ASCFG) trials as we grew lisianthus cultivars in both the greenhouse and in the field and had longer stems and larger flowers in the greenhouse. Those wanting more information on hoop house production of cut flowers should check out the programs of Chris Wien at Cornell and Laurie Hodges at the University of Nebraska, two faculty who have been doing a lot of work using hoop houses and have provided great information.

This article summarizes the results from the ASCFG National Cut Flower Trials. Last year, we had 35 cultivars from six companies that were grown by almost 50 trialers around the United States and Canada. At the end of the growing season, 30 trialers returned evaluations of the cultivars and their comments were used to pre-

pare this report. The trialers were primarily commercial growers of all size operations, but also included a handful of universities and suppliers. In addition, all cultivars are grown and evaluated at North Carolina State University (NCSU) in Raleigh, Zone 7.

While the results presented below are from both field and hoop house evaluations, the cultivars listed generally perform better in hoop houses. The full report, including all the cultivars, has been published in *The Cut Flower Quarterly*, available from ASCFG. The results from this trial and all trials since 1993 can be found on the following NCSU website: [www.ncsu.edu/project/cutflowers](http://www.ncsu.edu/project/cutflowers).

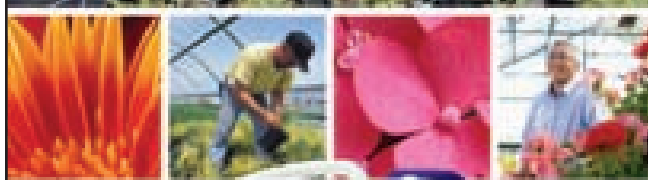
## Lisianthus

The days when lisianthus was a simple, single-flowered plant in purple, pink and white are long gone. Most striking were the spray-flowered Fioretti and the brown-hued Wonderous, both from Sakata Seed America. The Fioretti cultivars produced a multitude of small, perfectly shaped single flowers on a spray. 'Fioretti White' was noted for its pure-white petals, and 'Fioretti Yellow' for its pale-yellow petals. 'Wonderous Purple' and 'Wonderous Light Brown' also had smaller than typical flowers, but these cultivars had thick, richly colored petals, the backs of which were brown hued. Light Brown was actually more of a peachy-pink color. Both

Fioretti and Wonderous plants, unfortunately, were shorter, up to 2 feet tall for some trialers, and slower-growing than typical lisianthus. However, the post-harvest life of both series was excellent: more than 14 days in the NCSU tests, and respondents also noted a long vase life. The real question, of course, is the market. These lisianthus are probably best suited to connoisseurs who know how to grow lisianthus and have a well-developed market for them, such as upscale



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florists and farmers markets. Several respondents also commented that the Fioretti series was excellent for wedding work.

For the more mainstream lisianthus markets were the ABC cultivars from Pan-American Seed and 'Mariachi Carmine' from Sakata Seed America. The ABC series is well-liked for its reliability and durability, both in the field and the greenhouse. 'ABC 1-3 White' scored high enough to be nominated for ASCFG Cut Flower of the Year. One trialer summed it up as follows: "Beautiful snowy white, strong stem and good stem length, productive." 'Mariachi Carmine' also scored very well and was nominated for ASCFG Cut Flower of the Year. People loved its wonderful color. In the words of one trialer: "A favorite! The dark, dark pink double blooms were a real head-turner in the trial, long-lasting and showy."

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

### Stock

Stock is another species with excellent potential for hoop houses. Outdoor stock production is limited to those areas with temperatures cold enough to prompt flower initiation and high-quality stems but not so cold as to damage plants, which usually means no colder than light to moderate freezes. Thus, most commercial production has been from coastal California, although some areas of the southeastern United States can also produce high-quality stock in the winter.

This year's trial featured the Katz series from PanAmerican, which is notable in that it can initiate flowers at relatively high temperatures, eliminating the cold treatments necessary for most stock cultivars. This feature makes it suitable for greenhouse and season-extending hoop house production. These stock cultivars can be planted in the fall and will flower more quickly without the need for a winter vernalization. Hoop houses can be used to protect plants from the worst cold weather that can damage plants. Plant quality is best under cool temperatures, but they can grow well under warmer temperatures. A number of colors are available from white to bright pink. Stems averaged 15-17 inches long, with some trialers getting 2-foot-long stems. As with most colored stocks, each cultivar is actually a mixture of singles and doubles, with about 60 percent doubles.

One final comment: The name of the series was first listed as Mambo by PanAmerican Seed. Later they changed it to Katz to honor Philip Katz, who recently passed away. Philip worked for PanAmerican Seed for

## New Cultivars

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

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

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

many years and was one of the most knowledgeable cut flower specialists around. He was also remembered by many of us as one of the nicest, most sincere people we have ever known, and we are glad that he is being so honored.

### Ornamental kale

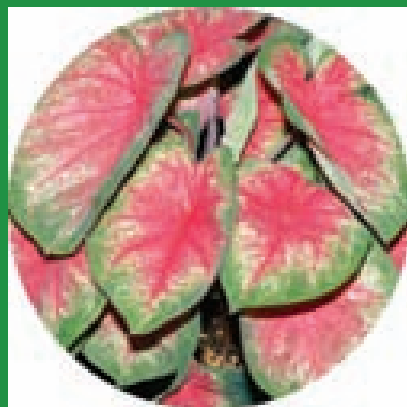
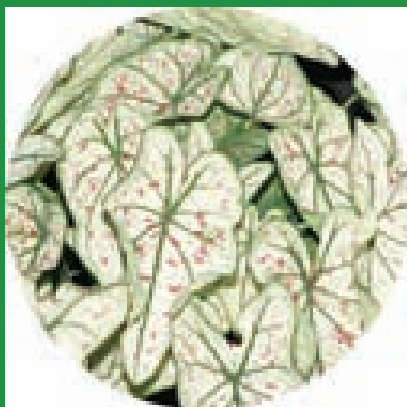
Cut kale is one of the plants that remind us that the term "specialty cut flowers" is often a misnomer. We grow kale for its large rosettes of colorful foliage. The cultivar in this year's trial, 'Pink Crane' from Takii Seed, scored



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very well, earning it a nomination for ASCFG Cut Flower of the Year. One of the issues with producing cut kale is getting the stems long enough. One trialer summed it up well: "...close spacing and mesh are needed." Another trialer mentioned the repeated removal of the lower leaves. Some of the nicest and tallest crops I have seen have been grown in hoop houses. Certainly one of the trialers has figured out how to grow kale, as they reported 36-inch stems. To put that in perspective, however, another trialer reported 2-inch stems. Not sure whether this is a selling point, but in Europe, cut kale dyed and painted various unearthly colors appears to be quite popular.

## Snapdragons

The two snapdragons in the trial this year represent the two flower types: closed (or regular) snaps and open-face (or butterfly) snaps. The latter have had a difficult time finding a place in the market, as most people want the regular snaps when they order snapdragons. One company has had success referring to the open-faced types by their cultivar name and not telling people they are snapdragons. 'Chantilly Dark Orange' from Takii Seed is a beauty, with long spikes of open-faced cinnamon-orange flowers. The average production yield was approximately five stems/plant, which were 22 inches long. However, at least one respondent reported stems more than 50 inches long. 'Animation Cognac' from Ernst Benary Seed represented the standard snapdragon flower shape. Its color combination of pastel pink and yellow also received rave reviews. Trialers reported an average of 6.8 stems per plant and more than 20-inch stem lengths. At least one trialer had 45-inch-long stems.

## Sunflowers

Sunflowers are an important species for specialty cut flower growers and, thus, an annual topic in this report. While sunflowers are more commonly field grown, an increasing number are grown in hoop houses and greenhouses. This year, two cultivars were included: 'Orange Glory' and 'Tosca', both with orange petals and dark centers. Both cultivars performed well, with 'Orange Glory' doing slightly better in the ratings, enough so that it was nominated for the ASCFG Cut Flower of the Year. The challenge for sunflower breeders is that so many excellent varieties are available with the classic orange petals and dark center that it is now difficult for a new cultivar to break into the market. Both cultivars were well received, but we will have to see where they fit into the marketplace.

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*Snapdragon 'Chantily Deep Orange'*

### Acknowledgments

A hearty thank you to all of the evaluators who returned their trial reports in 2007 and to the seed companies for providing such great cultivars. Congratulations to Laurie Hodges and Barbara Murphy for being the first trialers to return their evaluations. I would also like to thank Ingram McCall for taking care of the North Carolina State University portion of the trials; Tina Krug, Emma Locke, Erin Possiel, Erin Regan, Diane Mays, Brad Holland and Tim Ketchie for assisting with the NCSU trials; and Nick Corby for typing in the comments of several trialers. We would like to thank the American Floral Endowment and

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