

# 2009 ASCFG Cut

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Gomphrena is the Rodney Dangerfield of cut flowers – it gets no respect. This prolific, durable flower is grown by many as a great filler flower for bouquets, both fresh and dried, but is little discussed by growers. That has changed this year with the introduction of 'Audray Pink' and 'Audray Purple Red' (Takii). Trialers reported harvesting 15 stems from each plant and the stems averaged 17 inches long, quite good for gomphrena. At least one trialer reported getting 26-inch long stems. Even the postharvest life appears good, with an average vase life over 9 days. These gomphrenas scored well enough in the trials that both are nominated for ASCFG Cut Flower of the Year. Note that Takii has changed the name of gomphrena 'Bicolor Rose' to 'Audray Bicolor Rose'. This cultivar did quite well when it was tested in the ASCFG Trials back in 1995.

As you go through the comments section, you will see "Cornell Trial" in bold with many of the cultivars in the Additional Comments section. Chris Wien continued his popular high tunnel/field comparisons this year and noted when differences in yield and stem length occurred between the two environments. As you can see, the yield and stem length were quite different in some cases. For example, with 'Audray Pink' Chris harvested 12 stems from the field, 21 stems from the tunnel and the length was 24 inches in field and 28 inches in tunnel.



# Flower Seed Trials



In contrast to gomphrenas, we have had a number of zinnia cultivars in the trials over the year but zinnia 'Giant Wine' (Benary) stands out as one of the best. People loved the color, productivity - over 12 stems per plant - and long stems, averaging 20 inches but some getting 30 inches. We noticed, as did a couple of our trialers, that the burgundy color changes to purple a few days after harvest. The color is still nice but not as rich as the original burgundy color. The other zinnia in the trials, 'Red Beauty' (Genesis), also performed quite well. A number of trialers loved its bright red colors; however, at least one person thought it was too bright. Not a bad problem to have! Plants produced an average of 12 stems each and stem length averaged 20 inches.

The campanula Champion series (Sakata) was first tested in these trials in 1997 and went on to become a favorite cut flower of many growers. The large upright purple or pink bells became an instant wedding flower, and other colors were released later. This year improved versions of all four colors, purple, lavender, pink and white, were tested in the trials. Each plant produced an average of a little over three stems, which were approximately 17 inches long. Champion flowers under long days but needs some time under short days to build up enough plant to produce quality stems. If planted too late in the summer when days are long, stems will be very short. Plants should remain under short days until they have at least 2 to 3 true



leaves but the best stems are produced if plants have 8 to 9 leaves before long days start. If growing in the greenhouse or high tunnel, **shorts days should be 16 hour nights and long days at least 12, preferably 16, hours long days** if using lights. Postharvest is similar to lisianthus in that flowers have a long vase life. Buds on the purple cultivars will tend to open up pale purple if not treated with a flower food containing sugar.

We have two lisianthus trials to report on this year. Four cultivars were in the regular seed trials and ten were in a separate, mini trial using plugs provided by Gro 'N' Sell. In the regular trial the soft color, long stems and long vase life of 'Vulcan II Champagne' (Takii) made it a hit. Stem length averaged 20 inches, with at least one person getting 26-inch long stems. Folks tend to prefer double lissies but the single flowers of 'Vulcan Champagne' had enough substance to get noticed. Of the ten cultivars in the plug trial, 'Advantage Purple' and 'Arena IV Rose' received the highest marks. 'Advantage Purple' was noted for its long stems and elegantly colored buds and 'Arena Rose' for its long stems (tallest of the trial) and great color.

Red was *the* snapdragon color this year, seen in 'Opus III/IV Bright Red' (Goldsmith), 'Opus III/IV Red' (Goldsmith), and 'Potomac Crimson' (Ball). While stem lengths were a bit longer for Opus cultivars, the number of stems harvested was slightly more for Potomac. However, considering the informal nature of this trial, all three cultivars performed rather similarly. With stem lengths averaging 22 to 26 inches, 'Opus Red' was the overall favorite, scoring higher than the other two cultivars. Here at NCSU we continue to be impressed with the summer performance of snaps in our heat. They slow down during the middle of summer but still continue to produce stems suitable for small bouquets, and then come back strong in the fall.

It would not be an ASCFG cut flower trial without



Snapdragon 'Potomac Crimson'

sunflowers and we had three in the trials this year from Genesis: 'Tapuz', 'Zahav' and 'Zohar'. Unfortunately, the sunflower market is quite competitive (Translation: growers are a bit jaded when it comes to new sunflowers.) and it is difficult for a new cultivar to get noticed, especially if it is a classic orange-petaled/brown-centered cultivar. All three entries from Genesis performed quite well, producing stems of at least 30 inches. Flowers lasted a respectable 8 days according to participants and in the NCSU postharvest trials, Alicain Carlson got 12 days for 'Zohar' and 10.5 days for 'Tapuz'. Chris Wien continued his long-running work at Cornell on sunflower photoperiod and noted that all three cultivars were sensitive to short days, and would flower much earlier if planted in greenhouses or high tunnels early in the spring or late in the fall.



Gomphrena 'Audray Purple Red'

Fresh cut stocks are one of our favorite flowers, with their fragrance and soft colors. The fragrance of the Vivas cultivars (Sakata) was noted by a number of trialers who tested 'Vivas Blue', 'Clear Lavender', 'Light Pink' and 'Salmon Pink'. All produced stems averaging 20 to 23 inches but at least one trialer got up to 34-inch stems. 'Salmon Pink' was judged the favorite because of its color, sturdy stems, and large bloom size. This cultivar performed so well that it was nominated for Cut Flower of the Year.

In the deep south, winter is prime time for stock production. One of our trialers, Chazz Hesselein, held his 2008 stock 'Katz' seed until he planted it in the fall, after the time when results were compiled for the 2008 trial report. He was pleased to report that the stock 'Katz Cherry Blossom' and 'White' performed very well, each producing one 30-inch stem per plant. They received a score of 5 and 4, respectively, for consumer interest and both got a 5 for ease of production. Chazz noted stock 'Katz Cherry Blossom' for its fragrance, very attractive bicolored pink, strong stem, full head, and short crop time, resulting in a grow-again rating of 4. Stock 'Katz White' was noted for its fragrance, nice form, size and stem strength, but had too many singles compared to all double white cultivars. Thus, he gave it a grow-again rating of 2.

Overall, we had 34 cultivars from nine companies. Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year. Rankings are based on the combined ratings score: market appreciation (average of wholesale, florist, and consumer) + repeat again + ease of cultivation. Thus, from the 2009 trials gomphrena 'Audray Pink' and 'Audray Purple Red', lisianthus 'Vulcan II Champagne', snapdragon 'Opus Bright Red', stock 'Vivas Salmon Pink', and zinnia 'Benary's Giant Wine' are nominated as Cut Flowers of the Year and will join other nominations from ASCFG members.

**Interpreting the trial results:** The numbers reported are averages of all the respondents and many factors will affect the success of any plant species. Our participants are growing and harvesting the trial plants in a wide variety of ways. After looking at the average, check the range of responses listed below each number to see how the cultivar performed at its best and its worst. If the range of responses in the ratings is narrow and high, i.e., 3-5 or 4-5, the plant was a winner for most of the respondents and is likely to do well for you. The ‘Repeat Again Rating’ is particularly important because it indicates if the trialer would take the time, money, and space to actually grow the cultivar again. Review the trial results carefully. If a cultivar sounds interesting but did not appear to do well, try it anyway. The cultivar may work well for you.



**Campanula Champion Series**

**Acknowledgments:** A hearty thank you to all of the evaluators who returned their trial reports and to the seed companies for providing such great cultivars. Congratulations to Judith Reith-Rozelle and Carolyn Ramsbotham for being the first trialers to return their evaluations. We would also like to thank Emma Locke, Erin Moody, Erin Regan, Diane Mays, Brad Holland, and Tim Ketchie for assisting with the NCSU trials; and Erin Moody for typing in the comments of several trialers. In preparing the report we have edited the participants’ comments for space and clarity; our apologies if we’ve altered the tone or content of anyone’s comments.

Participating Seed Companies		Participating Growers	
<b>American Takii</b> Salinas, California www.takii.com	<b>Erin Benzakein</b> flore Mount Vernon, WA	<b>Shravan Dasoju</b> <b>Sharon Hampton</b> Ball Horticultural Santa Paula, CA	<b>Carolyn Ramsbotham</b> Riverview Farm Madbury, NH
<b>Ball Horticultural</b> West Chicago, Illinois www.ballhort.com	<b>Christof Bernau</b> UCSC Farm & Garden Santa Cruz, CA	<b>Chas and Linda Gill</b> Kennebec Flower Farm and Nursery Bowdoinham, ME	<b>Judith Reith-Rozelle</b> West Madison Ag. Research Station Verona, WI
<b>Benary</b> DeKalb, Illinois www.benary.com	<b>Leon Carrier</b> Plantmasters Laytonsville, MD	<b>Chaz Hesselein</b> Alabama Cooperative Extension System Mobile, AL	<b>Brenda Smith</b> Smith & Smith Farms Dayton, NV
<b>Fred C. Gloeckner &amp; Co.</b> Harrison, New York www.fredgloeckner.com	<b>Maureen Charde</b> High Meadow Flower Farm Warwick, NY	<b>Laurie Hodges</b> UNL Agronomy and Horticulture Lincoln, NE	<b>Vicki Stamback</b> Bear Creek Farms Stillwater, OK
<b>Genesis Seeds Ltd.</b> Ashalim, Israel www.genesisseeds.com	<b>Josie Crowson</b> Josie’s Fresh Flowers Nacogdoches, TX	<b>Ingram McCall, John Dole</b> North Carolina State University Raleigh, NC	<b>Cheryl Wagner</b> Wagner’s Homestead Farms Belleville, MI
<b>Goldsmith Seeds</b> Gilroy, California www.goldsmithseeds.com	<b>Connie Dam-Byl</b> William Dam Seed, Ltd. Dundas, ON		<b>Chris Wien</b> Dept. of Horticulture Cornell University Ithaca, NY
<b>Kieft-Pro-Seeds</b> Venhuizen, Holland www.kieft-pro-seeds.com	<b>Thea Folls</b> Foll’s Flower Farm Auburn, NY		
<b>Sakata Seed America, Inc.</b> Morgan Hill, California www.sakata.com			

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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 spacing (in. <sup>2</sup> /plant)	Average postharvest life (days)
			Wholesale	Retail	Consumer				
Basil 'Cardinal' Genesis Seeds	<b>5.7</b> 1-10	<b>15.5</b> 5-28	<b>3.0</b> 2-4	<b>4.5</b> 2-5	<b>3.8</b> 1-5	<b>3.8</b> 1.5	<b>4.3</b> 3-5	<b>107</b> 36-168	<b>8.5</b> 5-12
Calendula 'Maayan' Genesis Seeds	<b>6.4</b> 1-13	<b>14.4</b> 9-27	<b>2.0</b> 1-3	<b>3.0</b> 3	<b>2.5</b> 1-3	<b>2.2</b> 1-5	<b>3.8</b> 2-5	<b>96</b> 24-168	<b>6.3</b> 3-10
Campanula 'Champion Blue Imp.' Sakata Seed	<b>3.6</b> 1-6	<b>17.4</b> 12-20	<b>3.5</b> 3-4	<b>4.0</b> 3-5	<b>3.8</b> 3-5	<b>4.3</b> 3-5	<b>3.7</b> 3-5	<b>83</b> 36-144	<b>10.7</b> 5-14
Campanula 'Champion Lavender Imp.' Sakata Seed	<b>3.8</b> 1-6	<b>17.8</b> 12-22	<b>3.5</b> 3-4	<b>4.5</b> 3-5	<b>4.2</b> 3-5	<b>4.4</b> 3-5	<b>3.7</b> 3-5	<b>81</b> 36-144	<b>10.4</b> 5-14
Campanula 'Champion Pink Imp.' Sakata Seed	<b>3.8</b> 1-6	<b>17.6</b> 12-24	<b>3.5</b> 3-4	<b>3.5</b> 3-5	<b>3.8</b> 3-5	<b>4.1</b> 3-5	<b>3.7</b> 3-5	<b>81</b> 36-144	<b>10.1</b> 5-14
Campanula 'Champion White Imp.' Sakata Seed	<b>3.1</b> 1-6	<b>17.1</b> 12-20	<b>3.0</b> 3	<b>4.0</b> 3-5	<b>4.4</b> 3-5	<b>4.3</b> 3-5	<b>3.7</b> 3-5	<b>79</b> 36-144	<b>10.5</b> 5-14
Delphinium 'Belladonna Exp. Blue Donna' Gloeckner	<b>2.6</b> 1-6	<b>19.1</b> 14-30	<b>4.0</b> 3-4	<b>4.0</b> 4	<b>3.8</b> 2-4	<b>3.4</b> 2-5	<b>3.1</b> 2-5	<b>126</b> 36-324	<b>7.7</b> 6-10
Dianthus 'Fandango Purple Picotee' Goldsmith Seeds	<b>9.5</b> 2-38	<b>14.0</b> 6-26	<b>2.5</b> 1-4	<b>3.0</b> 1-5	<b>3.0</b> 1-5	<b>3.0</b> 1-5	<b>4.2</b> 2-5	<b>95</b> 36-168	<b>9.3</b> 6-14
Eryngium 'White Glitter' Benary	<b>2.6</b> 1-6	<b>19.5</b> 15-30	<b>3.0</b> 3	<b>4.0</b> 4	<b>2.3</b> 2-4	<b>2.5</b> 1-4	<b>3.6</b> 2-5	<b>118</b> 81-144	<b>9.3</b> 7-12
Gomphrena 'Audray Pink ' American Takii	<b>15.2</b> 2-60	<b>17.0</b> 8-26	<b>3.5</b> 3-4	<b>4.0</b> 2-5	<b>3.8</b> 2-5	<b>4.5</b> 3-5	<b>4.4</b> 4-5	<b>96</b> 36-144	<b>9.8</b> 3-14
Gomphrena 'Audray Purple Red' American Takii	<b>14.8</b> 1-60	<b>17.2</b> 8-26	<b>3.0</b> 2-4	<b>3.5</b> 2-5	<b>4.2</b> 2-5	<b>4.5</b> 3-5	<b>4.4</b> 3-5	<b>90</b> 36-144	<b>9.7</b> 3-14
Gomphrena 'Las Vegas Pink' Benary	<b>14.5</b> 3-60	<b>14.3</b> 10-22.5	<b>3.0</b> 2-4	<b>4.0</b> 4	<b>3.7</b> 3-5	<b>3.6</b> 1-5	<b>4.3</b> 3-5	<b>109</b> 36-168	<b>9.6</b> 6-14
Gomphrena 'Las Vegas Purple' Benary	<b>15.2</b> 5-60	<b>14.5</b> 10-23	<b>3.0</b> 2-4	<b>4.0</b> 4	<b>3.6</b> 3-5	<b>3.4</b> 1-5	<b>4.3</b> 3-5	<b>100</b> 36-168	<b>10.1</b> 6-14
Gomphrena 'Las Vegas White' Benary	<b>16.9</b> 3-60	<b>14.8</b> 11-21	<b>2.0</b> 2	<b>4.0</b> 4	<b>3.25</b> 2-4	<b>3.0</b> 1-5	<b>4.3</b> 3-5	<b>102</b> 36-168	<b>10.5</b> 6-14

<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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			Wholesale	Retail	Consumer				
Kale 'Giraffe' Murakami Seed	<b>0.5</b> 0-1	<b>24.0</b> 24	.	<b>5.0</b> 5	.	<b>3.0</b> 3	<b>5.0</b> 5	<b>81</b> 18-144	.
Larkspur 'Stiletta Indigo Blue' Kieft-Pro-Seeds	<b>2.4</b> 1-6	<b>18.5</b> 8-25.5	<b>4.0</b> 3-5	<b>5.0</b> 4-5	<b>3.0</b> 3-4	<b>3.7</b> 1-5	<b>3.6</b> 3-5	<b>73</b> 18-144	<b>8.4</b> 5-10
Larkspur 'Stiletta Rosy Red' Kieft-Pro-Seeds	<b>2.4</b> 1-6	<b>20.4</b> 10-34	<b>3.0</b> 3-4	<b>4.0</b> 4	<b>3.5</b> 3-4	<b>3.3</b> 1-5	<b>3.3</b> 3-4	<b>73</b> 18-144	<b>7.8</b> 5-10
Lisianthus 'Arena III Champagne' American Takii	<b>2.1</b> 1-5	<b>18.3</b> 12-30	<b>5.0</b> 5	<b>5.0</b> 5	<b>4.3</b> 3-5	<b>3.6</b> 2-5	<b>3.3</b> 2-5	<b>59</b> 16-144	<b>13.7</b> 13-14
Lisianthus 'Cinderella Lime' Goldsmith Seeds	<b>2.3</b> 1-4.5	<b>18.6</b> 10-28	.	.	<b>4.0</b> 4-5	<b>4.3</b> 3-5	<b>3.3</b> 1-5	<b>63</b> 16-144	<b>12.5</b> 10-14
Lisianthus 'Vulcan II Champagne' American Takii	<b>8.5</b> 5-12	<b>20.0</b> 12-26	.	<b>5.0</b> 5	<b>4.5</b> 4-5	<b>4.0</b> 3-5	<b>4.0</b> 3-5	<b>70</b> 16-144	<b>12.0</b> 10-14
Lisianthus 'Vulcan II Purple Picotee' American Takii	<b>3.0</b> 3	<b>17.8</b> 15-19.	.	.	<b>2.0</b> 1-4	<b>3.0</b> 1-5	<b>3.0</b> 1-4	<b>69</b> 16-144	<b>14.0</b> 14
Salvia 'Jerusalem' Genesis Seeds	<b>3.1</b> 0-7	<b>15.3</b> 10-24	<b>1.0</b> 1	<b>1.0</b> 1	<b>1.3</b> 1-4	<b>1.6</b> 1-4	<b>1.9</b> 1-5	<b>107</b> 36-224	<b>5.0</b> 5
Snapdragon 'Opus III/IV Bright Red' Goldsmith Seeds	<b>6.8</b> 1-19	<b>25.5</b> 15-50	<b>3.5</b> 3-4	<b>4.0</b> 3-4	<b>4.0</b> 3-5	<b>3.9</b> 3-5	<b>4.3</b> 4-5	<b>74</b> 9-144	<b>10.8</b> 7-16
Snapdragon 'Opus III/IV Red' Goldsmith Seeds	<b>7.4</b> 1-15	<b>25.8</b> 12-38	<b>4.0</b> 3-5	<b>4.0</b> 3-5	<b>4.3</b> 2-5	<b>4.4</b> 2-5	<b>4.8</b> 4-5	<b>69</b> 9-144	<b>9.8</b> 7-16
Snapdragon 'Potomac Crimson' Ball Horticultural	<b>8.9</b> 4-15	<b>21.9</b> 15-36	<b>4.0</b> 4-5	<b>4.5</b> 4-5	<b>4.6</b> 4-5	<b>5.0</b> 4-5	<b>4.6</b> 4-5	<b>88.9</b> 36-144	<b>10.0</b> 10
Stock 'Vivas Blue' Sakata Seed	<b>0.9</b> 0-1	<b>22.7</b> 13.5-34	<b>4.0</b> 4	<b>4.5</b> 4-5	<b>4.0</b> 3-5	<b>3.8</b> 2-5	<b>4.0</b> 3-5	<b>56</b> 6-144	<b>10.8</b> 7-14
Stock 'Vivas Clear Lavender' Sakata Seed	<b>0.8</b> 0-1	<b>20.1</b> 14-30	<b>4.0</b> 4	<b>4.0</b> 4	<b>5.0</b> 3-5	<b>3.7</b> 3-5	<b>4.0</b> 3-5	<b>61</b> 25-144	<b>11.3</b> 10-14
Stock 'Vivas Light Pink' Sakata Seed	<b>0.9</b> 0-1	<b>20.1</b> 14.5-28	<b>4.5</b> 4-5	<b>4.0</b> 3-5	<b>3.7</b> 3-5	<b>3.6</b> 2-5	<b>4.0</b> 3-5	<b>50</b> 6-144	<b>10.6</b> 7-14
Stock 'Vivas Salmon Pink' Sakata Seed	<b>0.9</b> 0-1	<b>21.8</b> 14-28	<b>5.0</b> 5	<b>4.5</b> 4-5	<b>4.0</b> 3-5	<b>4.0</b> 2-5	<b>4.0</b> 3-5	<b>47</b> 6-144	<b>10.8</b> 7-14

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			Wholesale	Retail	Consumer				
Sunflower 'Tapuz' Genesis Seeds	<b>1.9</b> 1-6	<b>35.1</b> 16-66	<b>3.7</b> 2-5	<b>4.0</b> 2-5	<b>3.6</b> 2-5	<b>3.0</b> 1-5	<b>4.3</b> 2-5	<b>186</b> 36-1296	<b>8.2</b> 7-11
Sunflower 'Zahav' Genesis Seeds	<b>1.5</b> 1-6	<b>34.0</b> 16-66	<b>3.5</b> 2-5	<b>3.5</b> 2-5	<b>3.7</b> 2-5	<b>3.0</b> 1-5	<b>3.9</b> 2-5	<b>183</b> 36-1296	<b>7.7</b> 7-10
Sunflower 'Zohar' Genesis Seeds	<b>1.2</b> 1-6	<b>32.3</b> 12-72	<b>3.5</b> 3-5	<b>3.7</b> 2-5	<b>3.6</b> 3-5	<b>3.0</b> 1-5	<b>4.2</b> 2-5	<b>165</b> 36-1296	<b>8.6</b> 7-12
Zinnia 'Benary's Giant Wine' Benary	<b>12.3</b> 1-60	<b>19.7</b> 10-30	<b>4.7</b> 3-5	<b>4.3</b> 3-5	<b>4.5</b> 4-5	<b>4.9</b> 4-5	<b>4.6</b> 3-5	<b>117</b> 36-252	<b>7.2</b> 5-10
Zinnia 'Red Beauty' Genesis Seeds	<b>11.7</b> 1-60	<b>19.6</b> 11-30	<b>3.5</b> 2-4	<b>4.0</b> 3-5	<b>3.7</b> 1-5	<b>3.5</b> 1-5	<b>4.3</b> 3-5	<b>116</b> 64-252	<b>7.1</b> 3-10

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**QUALITY, VALUE, VARIETY and SERVICE**  
*are what make the difference!*

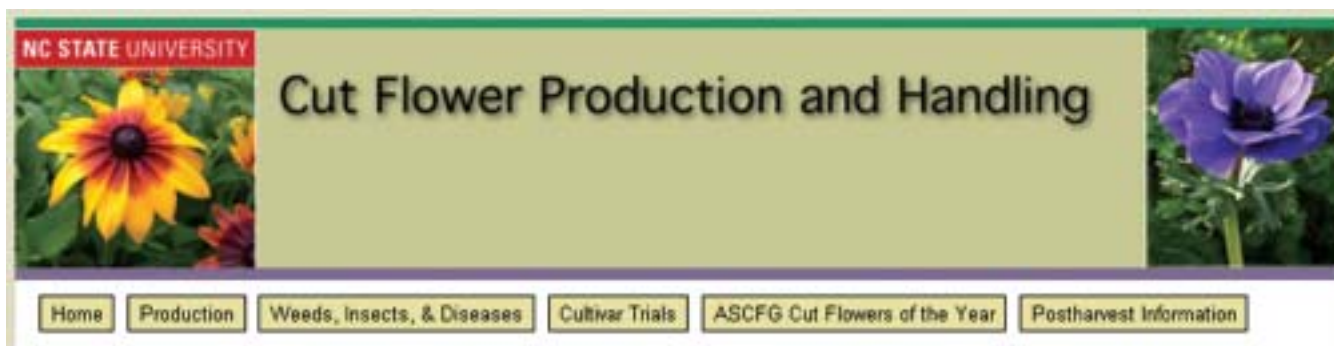
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**2009 Lisianthus Plug Trial Results.** Plugs provided by Gro 'N' Sell. The first row of data for each cultivar is the average and the second row is the range of responses. Note when only one response is listed, either only one person responded for 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	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 spacing (in. <sup>2</sup> /plant)	Average postharvest life (days)
Lisianthus 'Advantage Purple'	<b>1.3</b> 1-2	<b>15.3</b> 12-20	<b>4.0</b> 4	<b>3.5</b> 3-4	<b>4.0</b> 3-5	<b>80</b> 16-144	<b>14</b> 14
Lisianthus 'Arena III Pink'	<b>1.0</b> 1	<b>16.3</b> 13.5-20	<b>3.0</b> 2-4	<b>3.0</b> 2-4	<b>3.0</b> 3	<b>80</b> 16-144	<b>.</b> .
Lisianthus 'Arena III Yellow'	<b>1.0</b> 1	<b>14.8</b> 12-20	<b>3.5</b> 3-4	<b>3.0</b> 3	<b>3.0</b> 3-5	<b>80</b> 16-144	<b>13</b> 13
Lisianthus 'Arena IV Rose'	<b>1.3</b> 1-2	<b>19.5</b> 17-22	<b>3.5</b> 3-4	<b>3.5</b> 3-4	<b>3.5</b> 3-4	<b>80</b> 16-144	<b>.</b> .
Lisianthus 'Super Magic Apricot'	<b>2.0</b> 1-3	<b>15.8</b> 12.5-20	<b>3.5</b> 3-4	<b>3.0</b> 2-5	<b>3.0</b> 3	<b>80</b> 16-144	<b>.</b> .
Lisianthus 'Super Magic Deep Blue'	<b>2.0</b> 1-3	<b>15.5</b> 13-18	<b>3.0</b> 2-4	<b>2.5</b> 2-3	<b>3.5</b> 3-4	<b>49</b> 16-81	<b>5.0</b> 5
Lisianthus 'Super Magic Lavender'	<b>1.5</b> 1-2	<b>14.7</b> 11-18	<b>2.5</b> 2-3	<b>3.0</b> 2-5	<b>3.0</b> 3-5	<b>80</b> 16-144	<b>13</b> 13
Lisianthus 'Super Magic Peach'	<b>1.7</b> 1-3	<b>15</b> 13-18	<b>3.0</b> 2-4	<b>3.0</b> 2-5	<b>4.0</b> 3-5	<b>80</b> 16-144	<b>5</b> 5
Lisianthus 'Super Magic Purple'	<b>1.5</b> 1-2	<b>15.7</b> 12-20	<b>3.0</b> 2-4	<b>3.0</b> 2-5	<b>4.0</b> 3-5	<b>80</b> 16-144	<b>10</b> 10
Lisianthus 'Super Magic White'	<b>2.0</b> 1-3	<b>16.2</b> 13.5-20	<b>3.5</b> 3-4	<b>3.0</b> 3-5	<b>4.0</b> 3-5	<b>80</b> 16-144	<b>15</b> 15

<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.



### NCSU Cut Flower Website Updated

Have you ever wondered if *Pycnanthemum* 'Mountain Mint' would make a good cut flower? How about *Eupatorium* 'Carin', *Weigelia* 'Alexandra', or *Lavatera* 'Salmon Beauty'? The place to find the answers to these questions and many more is [www.ncsu.edu/project/cutflowers/](http://www.ncsu.edu/project/cutflowers/). You can find all the seed trial results since 1993 and the perennial and woody trial results since we started those trials in 1998 and 2004, respectively. For each cultivar, you will find the trial data, participant comments, supplier and photos, in some cases. Beside trial information, the website also includes our postharvest reports and links to other sites.



## Summary of Comments

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

### Basil

#### Basil ‘Cardinal’

(Genesis Seeds)

**Good Qualities:** Wonderful basil fragrance (4); Much stronger plant than Basil ‘Oriental Breeze’, did not break off or split as much as ‘Oriental Breeze’, it was about 2 ½ to 3 weeks later to bloom than ‘Oriental Breeze’; Would be very nice in a bouquet, unique flower unlike any other; None that I can see; Excellent stem length, good color contrast of blooms, vigorous; Forms a nice dark purple head, didn’t catch downy mildew like the rest of our basil; Everyone liked the color and texture it added to bouquets, some even liked it alone, it lasted well and added a lot of dimension; Beautiful purple stems and large flowers; Beautiful blooms, unusual, even held up in the cooler below 50 degrees; Very unusual flower but with the good basil smell; Very desirable, good plant size and quantity, quality and depth of color in the darker tip growth; Thicker leaves than other basils, used as a filler.

**Problems:** None (2); Took too long to flower (2); I planted too close together and both tended to lodge and be so tightly packed together that the plants were not done justice, this was my first time growing ornamental basil, I thought there would be taller spikes with many bracts but instead the terminals were sort of short and flat for both ‘Oriental Breeze’ and ‘Cardinal’; I did not know where to cut them. Basil ‘Cardinal’ was very late to show any color, the leaves reminded me of spinach because of their rounded edges, I much prefer ‘Oriental Breeze’ and so did my customers; Leaves cup, side shoots need to be removed or else flower spikes hidden; Flower heads were much too chunky and large, next time I will pinch and hope it helps



Basil ‘Cardinal’

produce more usable stems; We put this into the field too late to get any sizable stems; As with most basils, I wish they would grow just a little taller; Hit by frost on Sept. 19, just at the time the top leaves were developing crimson; I don’t know how this is used as a cut, the green leaves wilted out easily, it was short and bushy; I made pesto out of it.

**Similar species/cultivar:** ‘Oriental Breeze’ (2); No!; Reminded me of a celosia.

**Additional Comments:** Nice to have certified organic seed, high tunnel; No Japanese beetles! after 5 days in the vase it lost its color, looked brown, might be nice as a dried flower; Prefer blooms that spike more; Wish stems were longer, but did have usable stems, customers liked the subtle fragrance in bouquets; Sold ‘Oriental Breeze’ a number of years ago, but stopped due to lack of sales, we see ‘Cardinal’ as having more potential in the micro greens market; Harvested August week 2 to 3 (Planted in field 6/10, Zone 5); My new favorite basil; My customers loved this one, even customers that never buy cinnamon basil bought this one, they loved how it looked, we will be adding this one to our mix next season; we pulled whole plants as base bouquet filler; Perhaps it is too cold here (Zone 5).

**Postharvest Handling Recommendations:** Cut early in the day as they seemed to wilt and then come back, kept cool and if stems were woody, I would slit the bottom, also used Floralife; We cut it, got it out of the sun immediately and then re-cut it and put it in hot floral preservative and in a cooler at 50 degrees, not too cold; Seemed to hold better with overnight conditioning in water. *See separate report in this issue for results from NC State University postharvest evaluations.*

### Calendula

#### Calendula ‘Maayan’

(Genesis Seeds)

**Good Qualities:** Great pumpkin color (7); It seemed to be a fairly good producer; Good germination, strong stems and good height; Multiple small blooms on each stem; Lots of cuttable stems, drought tolerant; Nice flower shape; Nice lemon scent; Nice vibrancy and moderately vigorous plants.

**Problems:** Too short (4); Did not last very long in our postharvest testing (2); Just not the kind of flower my customers are looking for; Foliage very sticky; Blooms not especially attractive; Don’t think plants got a good start as they were tall going into the field and were maybe stressed, didn’t bloom long into the season, would have liked fuller flowers like shorter calendulas; Branched too much, kind of small; Many had ugly blooms, poor germination, maybe this is not a good choice for our climate; Too weedy for my customers; Fragile and brittle when trying to cut, difficult to know where to cut, outer stems on plant grew horizontal to the ground then curved and grew upright (needed more space and light), this curve was not corrected in a vase, once thinned with first cut the stems grew more upright, on one stem there will be one bloom not opened, one just opened, and one dead, stems got thinner with each cut, and less multiple blooms on a single cut, would take a grower a long time to cut a crop; Flower heads too small, it was more of a spray type calendula; Very poor seed germination for this cultivar - only 23 plants survived to transplant stage; A little bit mildew prone for us near the coast (California).

**Similar species/cultivar:** Very similar to calendula ‘Princess Yokosuka’ which was planted adjacent to ‘Maayan’, very hard to tell them apart; Reminded me of other calendulas.

**Additional Comments:** Calendula is a nice flower but for me, it can be produced only in a greenhouse and it just doesn’t produce enough to make it profitable, it also doesn’t last long enough to make it extremely popular either; I love calendula but have trouble selling it, even very cheaply in either spring or fall, this year we had hardly any aphids or spider mites on the calendula and made only one release of beneficial insects, there were many lacewing eggs spring and fall on calendula, I will continue to plant it for insect

habitat, we also have some interest in it for natural fabric dye, grown in high tunnels; Greenhouse grown; This is a super plant, without irrigation it is still blooming; Wish stems were stronger, but did have usable stems; Did not stand out in our trials as anything new or unique; Harvested 6/24 to 7/3 (Planted in field 4/25, Zone 5); Would not grow again; Did not look good with different stages of flowers on a stem; Perhaps it would be better in a dry year.

**Postharvest Handling Recommendations:** Cut early in the day as they seemed to wilt and then come back, kept cool and also used Floralife; No treatment. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

## Campanula

### Campanula ‘Champion Blue Improved’

(Sakata)

**Good Qualities:** Rich purple color (5); In the past we had only grown the blue and pink, the white and lavender were surprisingly popular and were outstanding; Outstanding productivity early in high tunnel, attractive flower; Early color; Strong stems; Long vase life, pleasing flower shape; Flowers were nice; Gorgeous and very popular, excellent vase life, no insect problems; Vigorous, showy plants with good stem quality.

**Problems:** Set back severely by spring weather conditions in field; Thrips magnet; Germination wasn’t good and didn’t have many plants to work with, did like what I got, but just wasn’t enough to make a good recommendation; Heat stress; As apical flowers fade, they shrivel and brown without dropping, thus reducing quality of appearance, even though the subsequent flowers look beautiful.

**Similar species/cultivar:** All colors of series are alike, we compared ‘Blue Improved’ to ‘Blue’ and found no difference; Other campanulas; For this entire series, I do not really see huge improvements over the standards.

**Additional Comments:** Harvested July week 1 to 3 (Planted in field 4/25, Zone 5); We will be adding the white and lavender to our regular plantings from now on, they are worth having in the mix, greenhouse grown, initial stem was large, 36 inches long, for the first one, plus 3 other smaller stems averaged about 15 inches; This may be better planted in the fall and row covered over winter; I should have used support netting; Market customers kept asking for more; We compared ‘Blue Improved’ to ‘Blue’ and found no difference; **Cornell Trial** yield: 2 in field, 8 in tunnel, length: 13 inches in field, 21 inches in tunnel.

**Postharvest Handling Recommendations:** I used just water; Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; No treatment.

### Campanula ‘Champion Lavender Improved’

(Sakata)

**Good Qualities:** Nice soft color (5); In the past we had only grown the blue and pink, the white and lavender were surprisingly popular and were outstanding; Strong stems and large blossoms, customers couldn’t get enough, great vase life with all blooms opening; Long vase live, pleasing flower shape; Flowers were nice; Outstanding productivity early in high tunnel, attractive flower; Loved by all.

**Problems:** Thrips magnet; Heat stress; Germination wasn’t good and didn’t have many plants to work with, liked what I got, but just wasn’t enough to make a good recommendation; Set back severely by spring



Campanula ‘Champion White Improved’

weather conditions in field; As apical flowers fade, they shrivel and brown without dropping, thus reducing quality of appearance, even though the subsequent flowers look beautiful.

**Similar species/cultivar:** Other campanulas; All colors of series are alike.

**Additional Comments:** Harvested in July week 1 to 3 (Planted in field 4/25, Zone 5); We will be adding the white and lavender to our regular plantings from now on, they are worth having in the mix, initial stems were large at 36 inches, 3 others averaged about 15 inches; New color for us, nice; A “must grow”; I should have used support netting; **Cornell Trial** yield: 2 stems in field, 10 stems in tunnel and length: 13 inches in field, 22 inches in tunnel.

**Postharvest Handling Recommendations:** I used just water (2); Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; Cut early in bloom cycle. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

### Campanula ‘Champion Pink Improved’

(Sakata)

**Good Qualities:** Great color (5); Great vase life, and form, strong stems although side shoots needed support, no insect problems, great spring flower, lots of blossoms that all opened up; Long vase live, pleasing flower shape; Flowers were nice; Outstanding productivity early in high tunnel, attractive flower.

**Problems:** Thrips magnet; Blossoms faded in color, from the base of the corolla outward, while in water, I liked this change/transition, but some of our audience took this to mean the flowers were over; Germination wasn’t good and didn’t have many plants to work with, did like what I got, but just wasn’t enough to make a good recommendation; Set back severely by spring weather conditions in field.

**Similar species/cultivar:** Other campanulas; All colors of series are alike.

**Additional Comments:** Harvested July week 1 to 3 (Planted in field 4/25, Zone 5); Initial stems were large at 36 inches, 3 others averaged about 15 inches; Most popular spring flower at market; I should have used support netting; **Cornell Trial** We included a topping treatment for this variety, and found no change in yield, stem length and earliness compared to untopped in the tunnel, but in the field, topped plants were 4 days later and produced twice as much yield, yield: 3 stems in field, 8 in tunnel and length: 13 inches in field, 20 inches in tunnel.

**Postharvest Handling Recommendations:** I used just water (2); Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; None.

### Campanula ‘Champion White Improved’

(Sakata)

**Good Qualities:** Really liked the white variety; In the past we had only grown the blue and pink, the white and lavender were surprisingly popular and were outstanding; Great vase life, very popular form and flower presentation; Beautiful colors particularly the blue and white, long vase live, pleasing flower shape; Color choice and flowers were nice; Outstanding productivity early in high tunnel, attractive flower.

**Problems:** Thrips magnet; Weakest of the Champions trialed, heat stress; Germination wasn't good and we didn't have many plants to work with, did like what I got, but just wasn't enough to make a good recommendation; Set back severely by spring weather conditions in field.

**Similar species/cultivar:** I did not notice any improvement in any of the ‘Improved Champion’ campanulas over the regular ‘Champion’; Other campanulas; All colors of series are alike.

**Additional Comments:** Harvested July week 1 to 3 (Planted in field 4/25, Zone 5); We will be adding the white and lavender to our regular plantings from now on, they are worth having in the mix, initial stem was large at 36 inches, 3 others averaged about 15 inches; I should have used support netting; Nice white; **Cornell Trial** yield: 2 stems in field, 9 in tunnel and length: 14 inches in field, 21 inches in tunnel.

**Postharvest Handling Recommendations:** I used just water (2); Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to

help with absorption. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

## Dianthus

### Dianthus ‘Fandango Purple Picotee’ (Goldsmith)

**Good Qualities:** Pretty color (4); Nice fragrance (2); Easy to harvest, very little foliage to strip; Dainty flowers, easy to grow; Nice filler, good for short vases; Would make a nice bedding plant; Very nice patterning; 20 days earlier than ‘Amazon Neon Rose’; Productive, early; This produced well into the summer in a hot greenhouse and put out a ton of stems, a very good producer, the color was unusual and eye catching, I believed we finally took it out in the middle of July after we had 9 days in a row of 116 degrees in that greenhouse; Easy to harvest. Easy to see where cut should be made to keep growth coming; Attractive form; Early flowers, could cut as a one-plant clump.

**Problems:** Too short (7) for anything except short bouquets; Doubleness and pattern are not consistent from plant to plant; Colors didn't work too well with other flowers; Few florets open on flower at one time, and these fade as others open; Since is was a bouquet dianthus, it took forever to pick, but worth the time; There were three shades - light, medium and dark, the light pink ones were shortest of the three, the dark ones were longest - stems got thinner as cuts were made and the number of stems went down, but stem length went up.



Dianthus ‘Fandango Purple Picotee’

**Similar species/cultivar:** No comments made by trialers.

**Additional Comments:** Would not grow again; I have left it in the ground to see if it will overwinter and come back taller; One florist said she liked it when she saw it in my field, she thought it would be a good filler in Oasis arrangements, but she never bought any, too short; Harvested 6/26 to 7/8 (Planted in field 4/25, Zone 5); I think this next season we will try it again and put it outside and see if it produces longer than the middle of July for us; Will it overwinter well?

**Postharvest Handling Recommendations:** Doesn't need anything special; Use very little bleach in the water if any at all, the stems are thin and more fragile, the stems turned white and soft when I used a 10% bleach solution; Water; None; Vase life was forever. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

## Eryngium

### Eryngium ‘White Glitter’

(Benary)

**Good Qualities:** Good plant stand, productive; Unique blooms, sturdy stem; Very distinctive silvery form, a nice contrast to the brighter/bolder colors in season; Has a unique characteristic, interesting shape of flowers, would add a really cool trait to a bouquet.

**Problems:** Very low seed germination (2); White color not clear, more greenish, at the spacing used, got a much-branched central stem that was too bushy for arrangements, should have pinched early, or crowded the plants more to get less branching, flowers smelled bad when first starting to flower, but the odor faded on later harvests; Blooms brown quickly in our humid climate, More stems per plant would be nice; It is very prickly so it is hard to harvest and handle in general; We seeded too late to get blooms first year.

**Similar species/cultivar:** None listed by participants.

**Additional Comments:** I liked it and it was useful in centerpiece work but did not sell by the bunch; I tried a new compost mix which was too heavy with manure and destroyed all of the seedlings of these plants. I won't make that mistake again!; Was very late to bloom, I did not harvest until 8/26/09 and still only 2 of 12 plants were blooming (Planted in field 5/27, Zone 4/5).

**Postharvest Handling Recommendations:** Water.

## Gomphrena 'Audray Pink'

(Takii)

**Good Qualities:** Beautiful color (6); Long stems (4); Productive (4); Strong stems (3); Great flower size and foliage; Attractive filler in arrangements, especially well adapted to warm tunnels in summer; Consistent flower color; Nice big bloom, easier to harvest than some gomphrenas; Branching habit; Very productive plants even in cool coastal California; Very good branching structure, would be very good for bouquets, this also made it easy to see where to cut in order for new keep new growth coming, the plants grew very well and were taller than the Las Vegas series, not affected by disease the same as the Las Vegas series, had a little brown/red on edges of leaves but that is it; This is a very tall cultivar, easy to harvest, I would grow this one again; Color mixed well with many other flowers for bouquets, nice accent, germination was good; plants were taller and stems easier to cut than the Las Vegas series, flower was also a little larger, but later to fill out than the Las Vegas.

**Problems:** Stems not long enough (3); None (2); Slow to bloom; Inconsistent stem length.

**Similar species/cultivar:** Gomphrena 'Purple Red'; Growing the same as other gomphrenas.

**Additional Comments:** I would definitely try this one again; My new favorite gomphrena; Was not affected anywhere near as bad with what hit the Las Vegas series, they showed a little reddening along the margins of leaves but that is it, overall did not affect growth rate, vase life, or vase quality; The only thing they can do to improve this cultivar is to add more colors; I liked the flower for its color and the plant grew very nicely, it was full and had many blossoms per stem each week, it had a stronger stem than the Las Vegas, but didn't get as full of color until later in the season, plants were tall and very nice, would be great garden plant as well as 'Las Vegas'; **Cornell Trial** yield: 12 stems in field, 21 stems in tunnel and length: 24 inches in field, 28 inches in tunnel.

**Postharvest Handling Recommendations:** I used only plain water, perhaps a hydrating solution would have helped, flowers had "bent neck" syndrome after one or two days and were really droopy in arrangements; Cool water, Floralife, cool after cutting and don't leave in heat of the field; Water; Forever.



## Gomphrena 'Audray Purple Red'

(Takii)

**Good Qualities:** Vibrant color (7); Productive plant (4); Strong stems (3); Color mixed well with many other flowers for bouquets, nice accent, germination was good, plants were taller and stems easier to cut than Las Vegas, flower was also a little larger, but later to fill out than Las Vegas; Attractive filler in arrangements, good stem length, especially well adapted to warm tunnels in summer; Especially good for mixed bouquets; Nice big bloom, easier to harvest than some gomphrenas; Excellent stem length; Kept its color when dried; The best branching structure of all the gomphrena in the trial, the branching was very uniform and straight, this is a great quality for bouquets, nice long stems, which were longer than the Las Vegas series; Very tall, easy to harvest, I would grow this one again; Great flower size, stem length and foliage.

**Problems:** None (2); Longer stems would have been nice; Slow to bloom; Inconsistent stem length; Some cuts were variable in number of stems, on 07/24/09 I cut some plants with 11 stems and some with zero, the plants with very few cuts were not ready because the side shoot blooms were not opening, I did not do my next cut until 08/06/09; Didn't hold up long enough.

**Similar species/cultivar:** Growing the same as other gomphrenas; 'Las Vegas Purple'.

**Additional Comments:** My new favorite gomphrena (2); I liked the flower for its color

and the plant grew very nicely, it was full and had many blossoms per stem each week, it had a stronger stem than the 'Las Vegas', but didn't get as full of color until later in the season, plants were tall and very nice, would be great garden plant as well as 'Las Vegas'; Was not affected (by possible bacteria disease) anywhere near as bad with what hit the Las Vegas series, they showed a little reddening along the margins of leaves but that is it, overall did not affect growth rate, vase life, or vase quality; The only thing they can do to improve this cultivar is to add more colors; I would definitely try this one again; **Cornell Trial** yield: 12 stems in field, 21 in tunnel and length: 24 inches in field, 27 inches in tunnel.

**Postharvest Handling Recommendations:**

Cool water, Floralife, cool after cutting and don't leave in heat of the field; Don't use too much bleach, it bleaches the bottom of the stems; I used only plain water, perhaps a hydrating solution would have helped, flowers had "bent neck" syndrome after one or two days and were really droopy in arrangements; Water; Postharvest "forever".

## Gomphrena 'Las Vegas Pink'

(Benary)

**Good Qualities:** Prolific flowering (4); Beautiful bright color (3); Early to bloom (2); Smaller heads more floriferous; No pest or disease problems; Long lasting in the field, easy to cut in clumps; Persistent grower, many stems to cut each week; Color mixed well with many other flowers for bouquets, nice accent, germination was good.

**Problems:** Plants were too short (4); Was so much shorter than my regular QIS purple and pink gomphrena that I did not bother to cut it as stem length was 6 to 8 inches; A few taller stems but not many; Somewhat wobbly stems; Flower heads small, weak and floppy, especially later in the season; No problems; Difficult to know where to cut to keep new growth coming, was affected more by disease than 'Audray Pink' and 'Purple Red'; Not a problem, but I think the stems were so full that when I tried to cut them they easily got tangled up; It is on the short side but not so short it made it unusable.

**Similar Species/cultivar:** 'Audray Pink'; 'Las Vegas Purple' and 'Las Vegas White', different colors but grew similarly and were affected the same by disease; Growing the same as other gomphrenas.

**Additional Comments:** I think it was too wet and cold for this crop this year; All the same

height; During trial, contracted a bacterium (was never officially diagnosed), this was determined because the plants that were cut were much worse than the ones that were not cut, the leaves curled and turned red and brown on the edges, stems and leaves also turned crispy, my hands felt powdery after I cut them which came from the stems and leaves, however, this did not affect the flowers, the color was only a little washed out, and the plant still kept the same average number of stems per plant, after not cutting for 3 weeks, leaves and stems look much better, to where it's hardly noticeable, affected vase life by 2 days; I liked the flower for its color and the plant grew very nice, it was full and had many blossoms per stem each week; It got about half the height of the Audray series for us. The colors were nice but the taller gomphrena varieties are easier to harvest; **Cornell Trial** yield: 11 stems in field, 23 in tunnel and length: 19 inches in field, 22 inches in tunnel.

**Postharvest Handling Recommendations:**

Floralife; Cool water, Floralife, cool after cutting and don't leave in heat of the field; None; Water; Postharvest life "forever".

**Gomphrena 'Las Vegas Purple'**

(Benary)

**Good Qualities:** Beautiful color (5); Very prolific flowering (3); Early to bloom (2); no pest or disease problems; Long lasting in the field, easy to cut in clumps; Persistent grower, could cut each week; Color mixed well with many other flowers for bouquets, nice accent, germination was good.

**Problems:** Flower heads small (2); Short stems (4); Weak and floppy, especially later in the season; None; Difficult to see where to cut to keep new growth coming, was more affected by disease than gomphrena 'Audray Pink' and 'Purple Red'; Not a problem, but I think the stems were so full that when I tried to cut them they easily got tangled up; It is on the short side but not so short it made it unusable; Was so much shorter than my regular QIS purple and pink gomphrena that I did not bother to cut it, stem length was 6 to 8 inches; A few taller stems but not many.

**Similar species/cultivar:** Growing the same as other gomphrenas; 'Las Vegas Pink' and 'Las Vegas White', different colors but reacted to disease and grew the same.

**Additional Comments:** All stems were the same height; During trial, contracted a bacterium (was never officially diagnosed), this was determined because the plants that were cut were much worse than the ones that were not



**Gomphrena 'Audray Purple Red'**

cut, the leaves curled and turned red and brown on the edges, stems and leaves also turned crispy, my hands felt powdery after I cut them which came from the stems and leaves, however, this did not affect the flowers, the color was only a little washed out, and the plant still kept the same average number of stems per plant, after not cutting for 3 weeks, leaves and stems look much better, to where it's hardly noticeable, affected vase life by 2 days; I liked the flower for its color and the plant grew very nice, it was full and had many blossoms per stem each week; It got about half the height of the Audray series for us, the colors were nice but the taller gomphrena varieties are easier to harvest; I think it was too wet and cold for this crop this year, harvested numerous short stems; **Cornell Trial** yield: 11 stems in field, 14 stems in tunnel and length: 18 inches in field, 21 inches in tunnel, this is also being marketed as a container plant and would be an excellent choice.

**Postharvest Handling Recommendations:**

Cool water, Floralife, cool after cutting and don't leave in heat of the field; None; Floralife; Water; Postharvest "forever".

**Gomphrena 'Las Vegas White'**

(Benary)

**Good Qualities:** Pure white colour (2); Prolific flowering (2); No pest or disease problems; No browning; Long-lasting in the field, easy to cut in clumps; Best of the Las Vegas series, cannot see white flowers coming out from

flower heads because flower head is white; Color mixed well with many other flowers for bouquets, nice accent, germination was good.

**Problems:** Too short (3); Not so short it made it unusable; Flower heads small, weak and floppy, especially later in the season; about 10 days later than other Las Vegas lines to start flowering; None; Difficult to see where to cut to keep new growth coming, was affected by disease more significantly than gomphrena 'Audray Pink' and 'Purple Red'; Not a problem, but I think the stems were so full that when I tried to cut them they easily got tangled up; Was so much shorter than my regular QIS purple and pink gomphrena that I did not bother to cut it, stem length was 6 to 8 inches.

**Similar species/cultivar:** Gomphrena 'Las Vegas Pink' and 'Las Vegas Purple', different color but reacted to disease the same and had same growing habit; Growing the same as other gomphrenas.

**Additional Comments:** It got about half the height of the Audray series for us, the colors were nice but the taller gomphrena varieties are easier to harvest; All the stems were the same height; During trial, contracted a bacterium (was never officially diagnosed), this was determined because the plants that were cut were much worse than the ones that were not cut, thought to have been transferred through pruners that had not been disinfected between cuts, the leaves curled and turned red and brown on the edges, stems and leaves also turned crispy, my hands felt powdery after I cut them which came from the stems and leaves, however, this did not affect the flowers, the flowers still looked good, the color was only a little washed out, and the plant still kept the same average number of stems per plant, after not cutting for 3 weeks, leaves and stems look much better, to where it's hardly noticeable, affected vase life by 2 days; I liked the flower for its color and the plant grew very nicely, it was full and had many blossoms per stem each week; **Cornell Trial** yield: 9 stems in field, 14 in tunnel; Length: 18 inches in field, 22 inches in tunnel, would be a great container plant!

**Postharvest Handling Recommendations:**

None; Cool water, Floralife, cool after cutting and don't leave in heat of the field; Water; Forever.

## Kale

### Kale ‘Giraffe’

(Murakami)

**Good Qualities:** It is absolutely stunning, both the purple and the white are very nice.

**Problems:** Too hot here, colored very early and short, and then bolted in the heat.

(Zone 7).

**Similar species/cultivar:** No comments made by trialers.

**Additional Comments:** If the postharvest issue can be solved and it won’t go down for my customers, I would absolutely grow this one again, it is beautiful, greenhouse grown.

**Postharvest Handling Recommendations:** This is a strange cultivar with regards to postharvest, if we don’t cut it and put it in HOT water with floral preservative, it will wilt, but when it wilts, we re-cut it and put it in HOT water with preservative and put it directly in the cooler and it will perk up, it did the same for one of my customers - my other kale varieties do not do this and I’m reluctant to grow this one again if it is going to continue to go down so easily.

## Larkspur

### Larkspur

#### ‘Belladonna Exp. Blue Donna’

(Gloeckner)

**Good Qualities:** Great blue color (4); Flowers were nice, germination was better than the other two varieties, strong stems; Productive in first year; Did not get any mildew even when all other belladonnas suffered, bloomed well first year from seed, healthy plants!; These were good quality plants that produced a principal stem and nice secondaries.

**Problems:** Little weak stems; Because of all the bad weather this did not get planted into the field when it should have, developed disease problems in the crates, would like to try again; Floret spacing on spike too wide, half of plants had died out by mid-September; No problems; Stems were not particularly strong and required staking, but I suppose this is usually the case with delphiniums.

**Similar Species/cultivar:** Other bellamosum types.

**Additional Comments:** We got only 1 or 2 blooms before they died, it was very wet for us this spring and things suffered; Greenhouse grown; I tried a new compost mix which was too heavy with manure and destroyed all of the seedlings of these plants, I won’t make that mistake again!; Harvested 8/4 to 8/20 (Planted in field 4/25, Zone 5);



Larkspur ‘Stiletta Rosy Red’

Initial bloom 24 inches long and 15 to 18 inch long secondaries; **Cornell Trial** yield: 6 in field, 3 in tunnel, length: 18 inches in both tunnel and field.

**Postharvest Handling Recommendations:** Cut early in the day, kept cool and used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption, No treatment; Water.

### Larkspur ‘Stiletta Indigo Blue’

(Kieft)

**Good Qualities:** Attractive blue flower (5); Went well with ‘Rosy Red’; Flowers were nice; The color was unreal - bright, deep, delphinium blue - a color I’ve never found in a larkspur; Many usable branches even at 6-inch spacing; Healthy plants.

**Problems:** Too short (2); Germination wasn’t good and didn’t have many plants to work with, liked what I got, but just wasn’t enough to make a good recommendation; Flower stems shorter than ‘Stiletta Rosy Red’; Other larkspur varieties are much better; In the past I’ve had better luck with larkspur, we got it into the field early enough but then we had a month of rain, no sun, and unusually cool weather, plants seemed stunted.

**Similar species/cultivar:** ‘Stiletta Rosy Red’.

**Additional Comments:** No yield, plants dwarfed by plug tray, wet spring; Although my customers loved the ‘Rosy Red’, I think the blue was their favorite, but we sold all of both, so they are both worth having; I tried a new compost mix which was too heavy with

manure and destroyed all of the seedlings of these plants, I won’t make that mistake again!; My wholesaler and florists went crazy over the color. It was a huge hit!; Cut the whole plant; **Cornell Trial** pinching early yielded 6 stems/plant, 22 in. long, delayed 3 days in harvest compared to the unpinched plants, tunnel-grown 31-inch main stem; 20-inch branches.

**Postharvest Handling Recommendations:** Cut early in the day, kept cool and used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; Water. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

### Larkspur ‘Stiletta Rosy Red’

(Kieft)

**Good Qualities:** Nice rose pink color (6); Flowers were nice; Looks great with the dark blue larkspur; Relatively tall main stems, many usable branches even at 6 inches spacing; Nice plant.

**Problems:** Too short (2); None (2); Germination wasn’t good and didn’t have many plants to work with, liked what I got, but just wasn’t enough to make a good recommendation; In the past I’ve had better luck with larkspur, we got it into the field early enough but then we had a month of no sun, rain and unusually cool weather, plants seemed stunted; Other larkspur varieties are much better.

**Similar species/cultivar:** ‘Stiletta Indigo Blue’.

**Additional Comments:** Didn’t do well after transplant, too wet; It might have done even better if we had gotten it out earlier, we sold everything we picked, so I consider it a success; I tried a new compost mix which was too heavy with manure and destroyed all of the seedlings of these plants, I won’t make that mistake again!; **Cornell Trial** pinching early yielded 6 stems/plant, 27 in. long, delayed 5 days in harvest compared to the unpinched controls, tunnel-grown plants produced 39-inch main stem and 20-inch side branches.

**Postharvest Handling Recommendations:** Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; Water.

## Lisianthus

### Lisianthus ‘Arena III Champagne’

(Takii)

**Good Qualities:** More resistant to botrytis than ‘Lime Green’; Amazing; Attractive double, ruffled petal edges; Nice color; Personally like the flower when it is not all the way opened as the color is deeper.

**Problems:** It was a cold damp summer so I did not start picking until my season was nearly over in mid-August, I started the seeds inside on Jan 23<sup>rd</sup>, Color is more green than champagne; Did not get first cut until 08/26/09 (Planted in field 5/27, Zone 4/5); Too short.

**Similar Species/cultivar:** The flower looks like a less productive ‘Cinderella Lime’; ‘Super Magic Peach’.

**Additional Comments:** This is a gorgeous flower, I bet it’s great in a high tunnel or in a year where there isn’t rain five days out of seven; Harvested Sept. (Planted in field 6/10, Zone 5); Petals are more “ruffled” than ‘Magic Peach’ or ‘Echo Champagne’, not as fully double but flowers larger than ‘Magic Peach’, I prefer ‘Echo Champagne’; Light orange peach color when opened then turns to light cream to white; Low germination; As I recall, these were better looking than ‘Vulcan Champagne’ in terms of height but the Vulcans were a bit ahead in maturity by 3 to 4 days, the October harvest stems were short (in high tunnels).

**Postharvest Handling Recommendations:** Flower food to open the buds; Water.

### Lisianthus ‘Cinderella Lime’

(Goldsmith)

**Good Qualities:** Beautiful, double bloom (3); Productive (2); First time I’ve tried lissies from seed, and germination was much better than I expected; Ruffled petal edges; Very nice soft green color that is not often seen in flowers, this makes them one of a kind, the color matches the color of the leaves well; The flower is gorgeous with many buds at the top, the germination of these seeds was about one hundred percent; Nice form, adequate stem length and strength.

**Problems:** Too short; Not as tall as ABC varieties for me, but very nice flower, not really “lime” colored - more white with slight greenish tint; None; Many stems bent over and then started growing upwards, very undesirable in a cut flower, this could have been due to wind (it was positioned in the field where it took the brunt of the wind) or

could be from being top heavy with so many blooms!; They were infected early with botrytis or whatever fungal disease I had and that really ruined them, I started spraying early with Milstop and sprayed for thrips, etc. but the constant rain made a good weekly schedule impossible.

**Similar species/cultivar:** ‘Arena Green’.

**Additional Comments:** I will definitely grow this one again; First of the trial lisianthus to bloom, first cut was on 08/10/09, next cuts of other lisianthus were not until 08/26/09 (Planted in field 5/27, Zone 4/5); This is a beautiful flower and I would grow it again; I tend to prefer the ‘Cinderella’ to the ‘Arena Green’ because of the form of the flowers and the green was a little sharper or brighter, although I am not personally fond of green lissies, these looked very good in arrangements with rudbeckia ‘Prairie Sun’ and with some purple/lavender flowers; **Cornell Trial** cold, rainy season in field was very bad

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Although I am not personally fond of green lisianthus, ‘Cinderella Lime’ looked very good in arrangements with rudbeckia ‘Prairie Sun’ and some lavender flowers.

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for lisianthus, but they grew well in the high tunnel, yield: Field 2 stems, tunnel 7 stems and length: field 20 in., tunnel 24 in.

**Postharvest Handling Recommendations:** They were cut into Floralife flower food for hard water; Water.

### Lisianthus ‘Vulcan II Champagne’

(Takii)

**Good Qualities:** Exceptionally tall (3); Single-flowered, ruffled petal edges; Color mixed well with many other flowers for bouquets, nice accent, germination was good. Stems were exceptionally strong, even in the open field; Really beautiful.

**Problems:** Color is more green than champagne, relatively late; No problems; Did not germinate.

**Similar species/cultivar:** Growing the same as other eustomas.

**Additional Comments:** Low germination; I liked the flower for its color and the plant grew very nicely. It was full and had many blossoms per stem each week. It survived the first frost and was a great plant; Harvested Sept. (Planted in field 6/10, Zone 5); I never got a cut on these, they were still not blooming

enough to cut on 09/07/09 (Planted in field 5/27, Zone 4/5); Nice, but not as nice as the double ‘Arena Champagne’, this was earlier than the double but didn’t really grab me.

**Postharvest Handling Recommendations:** Cool water, Floralife, cool after cutting and don’t leave in heat of the field; Water.

### Lisianthus ‘Vulcan II Purple Picotee’

(Takii)

**Good Qualities:** Attractive picotee edges; Really good purple color; Very cool! nothing like any other flowers, lime green center and yellow stigmas makes it very visually appetizing, the lime and purple striped buds that turn white with purple edges are all very attractive!

**Problems:** Short stems (2); Few stems, mid-season; On 09/07/09 only two plants were ready to cut (Planted in the field 5/27, Zone 4/5).

**Similar species/cultivar:** None.

**Additional Comments:** Did not germinate; Harvested Sept. (Planted in the field 6/10, Zone 5); Deeper green leaves than other lisianthus; As I was hoping, the late harvest got some stem length, these were striking even as a single with a bright, deep true purple and clean pure white contrast, petals had good substance, better than the other Vulcan, I can sell these even as single-flowered lissies.

**Postharvest Handling Recommendations:** Water.

## Salvia

### Salvia ‘Jerusalem’

(Genesis)

**Good Qualities:** Nice blue-purple color (2); Plants grew well but very short, The seeds germinated easily (2); Very hardy, healthy looking plugs, I thought it would be a real winner!; So far so good, plants look nice in the field, germination was good; None; Several flower spikes (usually 3) from a central stem, strong stems (no netting needed), one of 1<sup>st</sup> plants to bloom in spring; Nice form.

**Problems:** Rosetted but no flowers (3); Will winter over? Perennial?; Plants melted in the field; I don’t know if it was the cool weather, lack of sunshine and constant rain in June but the plant seemed to form a rosette and just sat in the field, we finally pulled it out at the end of August, couldn’t find much information about the plant online; This rotted out from too much rain; Short, poor germination, poor vase life, not very pretty; Hard to find stems without petal browning;

Very late to bloom, only got 5 stems off of one plant out of 12 plants on 08/26/09 (Planted in field 5/27, Zone 4/5); Slow to start or take off in the high tunnel until air temps were into the 80's.

**Similar species/cultivars:** No comments made by trialers.

**Additional Comments:** Probably too cold here in New York; Plants grew well and will bloom next season; Is this species, perhaps, a perennial?, after almost six months in the ground, they still had not even shown a hint of willingness to bloom, moving toward winter cover crops, we pulled the plug, but did pot some up into containers to see what the future might bring; Never again, not really as nice as salvia 'Majestic Spire'; Didn't bloom.

**Postharvest Handling Recommendations:** No comments made by trialers.

## Snapdragon

### Snapdragon 'Opus III/IV Bright Red'

(Goldsmith)

**Good Qualities:** Great color (5); The only difference I could see between the two was that the stem on 'Opus Red' was a dark red while the stem on 'Opus Bright Red' was green, 'Opus Bright Red' was the first to bloom at the beginning of July - perfect for July 4 bouquets!; Healthy, productive plants; Tall, strong stems, attractive dark red florets; Good stem length; I thought they were both great colors but they did not sell well for me, not sure why; Great for late summer planting, uniform growth, vigorous grower, good stem quality.

**Problems:** Tip breaks more easily than other varieties; Stems not as strong as some 'Opus' varieties that I have bought as plugs, but that may be because of my handling rather than a cultivar defect; Not a great difference in color to the others; Minor rust susceptibility.

**Similar species/cultivar:** Other Opus varieties.

**Additional Comments:** Good spike shape, slightly more open and spiral than most, good buds and strong stem; Relatively early for a Group II/IV: started flowering 82 days from sowing compared to 99 days for 'Rocket White'; Opus does better for me than any other snap I have tried; I would try them again just to make sure my customers haven't changed their minds, my customers seem to like pink, yellow and orange the best, maybe the red it just too dark for them, not sure; Pinched plants.

**Postharvest Handling**

**Recommendations:** None (2); Cut into hydrator and store in holding; Water.

### Snapdragon 'Opus III/IV Red'

(Goldsmith)

**Good Qualities:** Super color (3); Good stem length (2); Good plant vigor; nice uniform bloom time; Size, great in every way; Very healthy and productive; I thought they were both great colors but they did not sell well for me, not sure why.

**Problems:** Slightly more rust susceptible than the III/IV 'Bright Red'; None; Red was not a popular color when this began to bloom, too hot too early for me; Stems not as strong as some 'Opus' varieties that I have bought as plugs, but that may be because of my handling rather than a cultivar defect.

**Similar species/cultivar:** 'Potomac Crimson'; Other Opus varieties.

**Additional Comments:** Pinched plants; I liked this variety, I pinched it at 6 inches and got nice long shoots; I love this snap, it is stronger than the 'Opus White' and mixed colors, a super performer; Good spike form, long taper, a bit thin at the top, stem not as strong as similar group 3/4 varieties; Opus does better for me than any other snap I have tried; I would try them again just to make sure my customers haven't changed their mind, my customers seem to like pink, yellow and orange the best, maybe the red is just too dark for them, not sure.

**Postharvest Handling Recommendations:** None (2); Used Floralife for hard water; Cut into hydrator and then store in holding.

### Snapdragon 'Potomac Crimson'

(Ball Horticultural)

**Good Qualities:** Outstanding rich color (5); Lauded by all who saw it, decent plant vigor and stem quality; All the snaps I trialed had no disease problems and we were wet this summer and I didn't need to spray anything on them; More of a rosy red than the 'Opus', beautiful red-colored stems; Stems were strong, bloomed all season.

**Problems:** Later stems were somewhat more brittle than the first waves; Rust.

**Similar species/cultivar:** Nice and full like other Potomac varieties; Other Potomac snaps.

**Additional Comments:** Pinched plants; Harvested 7/1 to 7/8 (Planted in the field 4/25, Zone 5).

**Postharvest Handling Recommendations:** Cut early in the day, kept cool and used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; None.



Snapdragon 'Opus III/IV Bright Red'

## Stock

### Stock 'Vivas Blue'

(Sakata)

**Good Qualities:** Early to flower (3); Fragrance (2); Tall, interesting bicolor look as spike flowers open, light lavender ages to much darker lilac color, no branching; Attractive purple color, full blooms, stalk; Colors were nice; We grew the blue, salmon, pink, light pink, cream and lavender, all did well in the greenhouse and we sold them all, it would be fun to try them again.

**Problems:** Only one flower, too costly to grow; Not easily sorted by cotyledon color, tips abort in heat; Flower heads small - I am not sure if this is a weather or fertility issue, I cannot tell doubles from singles so waste a lot of space; I seeded these but think they went out too late to do anything, probably better early in a hoop house.



**Similar species/cultivar:** Japanese varieties although color is unique; None.  
**Additional Comments:** I'd love an all-doubles mix!; It was a nice stock and I was surprised how tall they got in the greenhouse since they were planted in the spring and not the fall, they would be worth another try.

**Postharvest Handling Recommendations:** Floralife, keeps well in cooler; Did fine no matter what we did.

### Stock 'Vivas Clear Lavender'

(Sakata)

**Good Qualities:** Nice stem strength/girth, strong without being too bulky, the color was very pleasing to the eye and received lots of praise from our various audiences; Good head and stem size, fragrant; Scent is great, colors were nice; We grew the blue, salmon, pink, light pink, cream and lavender, all did well in the greenhouse and we sold them all, it would be fun to try them again.

**Problems:** Nothing to note; None, was a bit slower to bloom than other Vivas varieties; Flower heads small - I am not sure if this is a weather or fertility issue,

I cannot tell double from single so waste a lot of space; I seeded these but think they went out too late to do anything, probably better early in a hoop house.

**Similar species/cultivar:** No comments made by trialers.

**Additional Comments:** I had some seed left and just did another small planting of both cultivars in the trial, I am really looking forward to seeing how they do over the winter in the field, fall planted stock typically gives us 24"+ stems in January-early February; I'd love an all-double mix!; It was a nice stock and I was surprised how tall they got in the greenhouse since they were planted in the spring and not the fall, they would be worth another try.

**Postharvest Handling Recommendations:** Water quality/care for organic postharvest handling of stock is really something I should apply for an ASCFG Grower Grant (*Yes, you should! Author comment*); Floralife, keeps well in cooler; Did fine no matter what we did; Hydrogen peroxide.

### Stock 'Vivas Light Pink'

(Sakata)

**Good Qualities:** Pink color (2); Fragrance (2); Consistent quality stems; In the field and when first cut, this was a very nice light pink color and was well appreciated; Cotyledons



selectable, good dense spikes, no branching; Early flower; We grew the blue, salmon, pink, light pink, cream and lavender, all did well in the greenhouse and we sold them all, it would be fun to try them again.

**Problems:** None; Unfortunately, after about 7 days in water, flower color faded, though they held their form until day 10; Spikes get clubby in heat, bud pack aborts, would not be a problem if not grown in heat; Only one flower, too costly to grow; Flower heads small - I am not sure if this is a weather or fertility issue, I cannot tell double from single so waste a lot of space; I seeded these but think they went out too late to do anything, probably better early in a hoop house.

**Similar species/cultivar:** Several of the Japanese varieties.

**Additional Comments:** I'd love an all-double mix!; It was a nice stock and I was surprised how tall they got in the greenhouse since they were planted in the spring and not the fall, they would be worth another try.

**Postharvest Handling Recommendations:** Floralife, keeps well in cooler; Did fine no matter what we did; Hydrogen peroxide.

### Stock 'Vivas Salmon Pink'

(Sakata)

**Good Qualities:** Very good pink color (3); Fragrance (2); Early to flower; Long strong

spikes, densely packed, no branching, tall, fairly quick to flower; Stands out next to other colors, good stem diameter, bloom size; We grew the blue, salmon, pink, light pink, cream and lavender, all did well in the greenhouse and we sold them all, it would be fun to try them again.

**Problems:** One flower, too costly to grow; No cotyledon selectable, can't see any salmon color or influence, the color here is very deep pink, tips abort in heat, timing is quite variable; None; Flower heads small - I am not sure if this is a weather or fertility issue, I cannot tell double from single so waste a lot of space; I seeded these but think they went out too late to do anything, probably better early in a hoop house.

**Similar species/cultivar:** Many Japanese cultivars.

**Additional Comments:** I'd love an all-double mix!; It was a nice stock and I was surprised how tall they got in the greenhouse since they were planted in the spring and not the fall, they would be worth another try.

**Postharvest Handling Recommendations:** Floralife, keeps well in cooler; Did fine no matter what we did.

## Sunflower

### Sunflower 'Tapuz'

(Genesis)

**Good Qualities:** Rich sunflower color (6); Stem strength, big heads, 6 to 8 inches across; Standard single stem; Nice, strong stems and attractive flowers; Practical size for a sunflower; Sturdy stem and neck, good form; Stems were strong, bloomed all season; So similar to 'Zahav' that I could not tell the difference.

**Problems:** Neck is thick, blooms later than others; Some side bud production near the principal head that had to be removed; This one did not germinate well, so we pinched it to get more flowers; Leaves were very damaged by disease early in the season when conditions were wet, this created a lot of extra work since we had to do so much additional cleaning in order to have saleable stems, even then half the crop was a loss, also these plants were branching, not singles, later plantings did much better with disease, this variety is definitely more suited for hot, dry climates; The field they were planted in was of lower fertility so the flowers were small; After first cut no new side blooms grew; A bit short (grown in short days); Germination was good, flowers were nice but they didn't seem to last

as long as the others; These went out as plugs and these and my first crop of sunflowers rotted ....so wet this spring; Seed germination was very poor - 50%; **Cornell Trial** 77 days to flower with long-day conditions (summer), very sensitive to short days as the plants flower 24 days earlier if grown at 12 hours daylength in seedling stage.

**Similar species/cultivar:** Many other orange sunflowers (2); So hard to really tell them all apart.

**Additional Comments:** I prefer branching sunflowers so if I miss the timing on picking I get another chance; I'm ashamed to admit that I got these all mixed up with 'Zahav' and 'Zohar' and none of them did that well for me; Shortest compared to 'Zahav' and 'Zohar', smallest blooms of the three as well, while growing the stems curved, some a lot more than others, this could have been due to wind, light, and/or being too crowded, once thinned the worst ones out they did not curve more, but the ones that were left in with a little curve did not correct itself in the field; Would not grow either cultivar again; **Cornell Trial** length was 59 inches under long days and 34 inches under short days.

**Postharvest Handling Recommendations:** Cut into hydrator and store in holding; Used Floralife for hard water; Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption; None; Water. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

## Sunflower 'Zahav'

(Genesis)

**Good Qualities:** Good traditional color (3); Strong stems (3); So similar to 'Tapuz' that I could not tell the difference; Another strong-stemmed, large-headed variety, but not a real standout; Standard single stem; Attractive flowers; Traditional form, good necks; Bloomed all season.

**Problems:** Very poor germination (2), only 25% (*according to one trialer*); Like 'Tapuz', this variety produced small side buds that had to be removed to improve appearance/quality; Leaves were very damaged by disease early in the season when conditions were wet, this created a lot of extra work since we had to do so much additional cleaning in order to have saleable stems, even then half the crop was a loss; also these plants were branching, not singles, later plantings did much better with disease, this variety is

definitely more suited for hot, dry climates; The field they were planted in was of lower fertility so the flowers were small; After first cut no new side blooms grew; A bit short (grown in short days); Germination was good on all but the 'Zohar', flowers were nice but they didn't seem to last as long as the others; These went out as plugs and these and my first crop of sunflowers rotted ....so wet this spring; **Cornell Trial** 77 days to flower with long-day conditions (summer) - very sensitive to short days as plants flowered 22 days earlier if grown at 12 hours daylength in seedling stage.

**Similar species/cultivar:** Most orange sunflowers (2).

**Additional Comments:** Would not grow this cultivar again; I prefer branching sunflowers so if I miss the timing on picking I get another chance; Harvested 7/27 (Planted in field 4/15, Zone 5); I'm ashamed to admit that I got these all mixed up with 'Tapuz' and 'Zohar', none of them did that well for me; Second tallest compared to 'Tapuz' and 'Zohar', second largest blooms of the three as well, while growing the stems curved, some a lot more than others, this could have been due to wind, light, and/or being too crowded, once thinned the worst ones out they did not curve more, but the ones that were left in with a little curve did not correct itself in the field; **Cornell Trial** length: 62 inches under long days and 36 inches under short days.

**Postharvest Handling Recommendations:** Postharvest in water (2); Cut into hydrator and store in holding; Used Floralife for hard water; Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption.

## Sunflower 'Zohar'

(Genesis)

**Good Qualities:** Sturdy stems (4); Rich color (2); Classic colouring with yellow and orange (3); Quick to flower (2); All plants bloom same time; Probably the best of the trials group, rather large heads; Standard single stem orange; Nice, attractive flowers; Very nice, very uniform; Nice flower size for bouquet work; Large stems; Bloomed all season.

**Problems:** Appears very daylight sensitive, frequently double bud terminal stem end, short (grown short-day); Same side bud formation problem, as with 'Tapuz' and 'Zahav', but less pronounced and not as many down the stem; Leaves were very damaged by disease early in the season when conditions were wet, this

created a lot of extra work since we had to do so much additional cleaning in order to have saleable stems, even then half the crop was a loss, also these plants were branching, not singles, later plantings did much better with disease, this variety is definitely more suited for hot, dry climates; The field they were planted in was of lower fertility so the flowers were small; My customers just didn't like the color plus the germination with this one was not good at all; Center ripens before petals totally unfurl; After first cut no new side blooms grew, flower heads are very large!, too large for a bouquet; Germination was good on all but 'Zohar'. Flowers were nice but they didn't seem to last as long as the others; These went out as plugs and these and my first crop rotted ....so wet this spring; **Cornell Trial** 72 days to flower with long day conditions (summer), very sensitive to short days as flowering was 21 days earlier if grown at 12 hours daylength in seedling stage.

**Similar species/cultivar:** Most orange sunflowers (2).

**Additional Comments:** I prefer branching sunflowers so if I miss the timing on picking I get another chance; Harvested 7/16 to 7/27 (Planted in the field 4/25, Zone 5); Would not grow this one again; I'm ashamed to admit that I got these all mixed up with 'Zahav' and 'Tapuz', none of them did that well for me, but I will probably try 'Zohar' again; Tallest compared to 'Tapuz' and 'Zahav', largest blooms of the three as well, while growing the stems curved, some a lot more than others, this could have been due to wind, light, and/or being too crowded; once thinned the worst ones out they did not curve more, but the ones that were left in with a little curve did not correct itself in the field; **Cornell Trial** length: 49 inches under long-day conditions and 23 inches under short days.

**Postharvest Handling Recommendations:** Postharvest in water (2); Cut into hydrator and store in holding; Used Floralife for hard water; Cut early in the day, kept cool and also used Floralife, strip bottom foliage before putting into buckets, seems to help with absorption. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

## Zinnia

### Zinnia ‘Benary’s Giant Wine’

(Benary)

**Good Qualities:** Gorgeous color (7); Full flowers (2); Great addition to our collection of zinnia varieties to grow; Color mixed well with many other flowers for bouquets, nice accent, germination was good, plants grew well and didn’t get mildew until late in season when cool weather started, many stems were not cut because they were short, but that made for a nice color in the field, there were still many useful stems; Attractive, large flower; Good plant vigor, almost no mildew problems, high quality stems; All so far have been fully double when ‘Benary Yellow’ and ‘Benary Scarlet’ in the same hoop house are mixed doubles and singles, especially ‘Benary Yellow’, this zinnia is stunning and I highly recommend it; Huge, productive, healthy plants; Size - fully double, too bad it isn’t as consistent as ‘Uproar Rose’; 4 days into vase life turned a beautiful purple!; Outstanding quality of bloom; Good vase life, beautiful color that adds to the range of color already in the series, florist repeatedly requested that “burgundy”-colored zinnia, my crew loved working with it in bouquets; Prolific, bloomed all season, nice long stems.

**Problems:** No problems (3); Occasionally, flowers were irregular or misshapen; Same as other zinnias; Poor season to trial heat lovers - cold and wet here - ruined flowers; Variable stem lengths on first cut, powdery mildew set in before plants could produce many blooms on a single plant.

**Similar species/cultivar:** Grows the same as other Benary zinnias (3); Other zinnias; ‘Benary’s Giant Purple’.

**Additional Comments:** I liked the flower for its unique color and the plant grew very nicely, it was full and had many stems each week; Vivid solid color; Postharvest “comparable to others”; Loved this flower! very bold; Was expecting a different colour from the description (wine/merlot); A new favorite; Harvested 7/22 to 8/11 (Planted in the field 6/10, Zone 5); **Cornell Trial** yield: 6 stems in field, 2 stems in tunnel and length: 23 inches in field, 22 inches in tunnel.



Zinnia ‘Benary’s Giant Wine’

**Postharvest Handling Recommendations:** Postharvest in water (2); Floralife; Cool water, Floralife, cool after cutting and don’t leave in heat of the field. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

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Zinnia ‘Red Beauty’ is a great addition to our collection of zinnia varieties. Double flowers, good stem length.

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### Zinnia ‘Red Beauty’

(Genesis)

**Good Qualities:** Excellent color (5); A great addition to our collection of zinnia varieties to grow; Double flowers, good stem length and size; Color mixed well with many other flowers for bouquets, nice accent, germination was good, plants grew well and didn’t get mildew until late in season when cool weather started, many stems were not cut because they were short, but that made for a nice color in the field, there were still many useful stems;



Zinnia ‘Red Beauty’

Nice big flower, strong stems; Even colour throughout plants; Prolific, long-blooming; Uniform flower appearance, medium early; Good stem length, plant height and flower production, uniformity of bloom and almost all flowers having a prominent ring of disk flowers; Very good quality, rich red, unlike other fall tones we have late in the season, vigorous plants with almost no mildew problems, even late in the season.

**Problems:** No problems (2); Very poor vase life as compared with ‘Giant Wine’ which I was cutting at the same time; Color was too bright, impossible to work into bouquets or mixed bunches, ugly; Bad weather made flowers useless if they were rained on a lot, which caused a fungus disease too; Flower not consistently double, Japanese beetles preferred it to the other zinnias in trial!; Not

uniform, some nice, some ho-hum; Flower not as large as some; Subject to fungal leaf spot found on all zinnias; Like the white, this variety sometimes had irregularly-shaped flowers, but otherwise it was a great variety; Powdery mildew set in before plants could produce many blooms on a single plant.

**Similar species/cultivar:** Grows the same as other zinnias.

**Additional Comments:** I didn’t think ‘Red Beauty’ had anything special about it to merit choosing it over the reds offered in the Benary series. Postharvest - water quickly became murky; I liked the flower for its bright color and the plant grew very nicely, it was full and had many stems each week; Perhaps due to bug damage, this did not appear to be a professional quality zinnia; I like this one, but not as much as ‘Giant Wine’; Harvested July 20th to Aug. 11 (Planted in the field 6/10, Zone 5); **Cornell Trial** yield: 7 stems in field, 2 in tunnel and length: 24 inches in both tunnel and field.

#### Postharvest Handling

**Recommendations:** Cool water, Floralife, cool after cutting and don’t leave in heat of the field; Used plain water or Floralife, changed water after 24 hours; 7-10 days if dry; Still looked good after a week; Water. *See separate postharvest report in this issue for results from NC State University postharvest evaluations.*

## Lisianthus Plug Trial

### Lisianthus 'Advantage Purple'

**Good Qualities:** The yellow stigma is very nice contrasting color to the purple, the buds are also very cool with the lime green and purple stripes.

**Problems:** Too short.

**Similar Species/cultivar:** 'Super Magic Deep Blue' and 'Super Magic Purple'.

**Additional Comments:** More of a "single flower" on some, not as large and lush as 'Mariachi Blue', discoloration at edges of outer petals - too much rain?

### Lisianthus 'Arena III Pink'

**Good Qualities:** Very elegant pink color, buds are very cool with lime green and pink shades, also have very cool lime green and pink centers!

**Problems:** Too short; Small blossom, not as fully double, color was very pale, bloomed late and didn't pick much.

**Similar Species/cultivar:** No comments made by trialers.

### Lisianthus 'Arena III Yellow'

**Good Qualities:** Nice color (2); Nice larger flower, almost as large and double as yellow Mariachi, Arena series had taller stems than 'Magic'.

**Problems:** Late to open; These were the shortest of all lisianthus, they were also very slow to recover from the first cut, my first cut was on 8/26/09 and with my next cut only one plant out of seven had one bloom that was ready to be cut again on 09/07/09 (Planted in field 5/27, Zone 4/5).

**Similar Species/cultivar:** No comments made by trialers.

**Additional Comments:** Paler yellow than Mariachi, not as fully double.

### Lisianthus 'Arena IV Rose'

**Good Qualities:** Last to bloom, centers starting to show on 9/5; Great color and stem length, this was our best lisianthus; Tallest of all lisianthus.

**Problems:** Bloomed a little later than all the other lisianthus; No plants are yet blooming on 09/07/09 (Planted in field 5/27, Zone 4/5).

**Similar Species/cultivar:** No comments made by trialers.

**Additional Comments:** Not as deep a color as 'ABC Rose', but tallest of the Arenas, ABC is more showy.

### Lisianthus 'Super Magic Apricot'

**Good Qualities:** Pretty peachy color, paler as it opens, not fully double; Pretty color; Awesome center with dark pink and yellow, you can see dark pink even when the blooms are not totally open, gives depth to the flower.

**Problems:** Did not last more than 5 days; Too short; Bloomed too late to get cuts, thinner stems than other lisianthus.

**Similar Species/cultivar:** 'Arena III Pink'.

**Additional Comments:** These bloomed too late to get a cut, all I could do was count the blooms on the plant that would have been cut if I had time, this was on 09/07/09 and only three plants were ready to be cut (Planted in field 5/27, Zone 4/5).

### Lisianthus 'Super Magic Deep Blue'

**Good Qualities:** Nice deep colors - smaller blossom than Mariachi, not fully double.

**Problems:** Flowers didn't last as long as Mariachi and no side buds opened, side buds "crashed" despite being recut and put in clean water after 3 or 4 days; Too short.

**Similar Species/cultivar:** No comments made by trialers.

### Lisianthus 'Super Magic Lavender'

**Good Qualities:** Pretty, two-tone flower, nice and double with dark throat; Very pretty with dark purple insides.

**Problems:** Some flowers never fully opened, postharvest not as good; Too short, flower color was very light and had a muddy look to it.

**Similar Species/cultivar:** No comments made by trialers.

**Additional Comments:** Many plants are tallest of the Super Magic series, did not get first cut until 08/26/09 (Planted in field 5/27, Zone 4/5).

### Lisianthus 'Super Magic Peach'

**Good Qualities:** Pale peachy color - similar to 'Echo Champagne', much paler when fully opened, more toward yellow, not as fully double as Mariachi; Pretty color; Very nice color; light orange/peach with a tint of pink.

**Problems:** Did not hold up as long as Mariachi, only 5 days, side buds wilted easily; Too short.

**Similar Species/cultivar:** No comments made by trialers.

**Additional Comments:** Did not get first cut until 08/26/09 (Planted in field 5/27, Zone 4/5).

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### Lisianthus 'Super Magic Purple'

**Good Qualities:** Pretty, hard to distinguish color from 'Deep Blue', maybe slight "red" highlight, flower larger, more double, stem taller than blue.

**Problems:** Did not last more than 5 days; Too short.

**Similar Species/cultivar:** 'Super Magic Deep Blue' and 'Advantage Purple'.

**Additional Comments:** Did not get first cut until 08/26/09 (Planted in field 5/27, Zone 4/5).

### Lisianthus 'Super Magic White'

**Good Qualities:** Fully double flower with green throat, very nice, might try again; Very nice pure white flower.

**Problems:** Too short.

**Similar Species/cultivar:** No comments made by trialers.

**Additional Comments:** Vase life is very long, did not get first cut until 08/26/09 (Planted in field 5/27, Zone 4/5).