

## 1999 ASCFG National Seed Trials

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1999 was the year of the sunflower with nine cultivars submitted for evaluation by four seed companies, including three unnamed experimental cultivars. Sunflowers have changed dramatically in status over the years. Originally the sunflower was a garden flower, field crop and little-grown cut flower. In the early 1990's the sunflower became a bonafide decorating fad and cut flower bonanza. The sunflower was everywhere - from placemats to curtains and cut stem prices were excellent. While most fads disappear from view in a few months or years (Just where is that Cabbage Patch doll anyway?), the sunflower has defied expectations and developed into a dependable workhorse of the cut flower industry. Here at Oklahoma State University we are even working on sunflowers as a greenhouse crop.

Certainly a large part of the sunflowers' staying power is due to the introduction of new and refined cultivars. Once primarily available only in one color, yellow/orange and two sizes, large or gigantic, the sunflower is now available in a variety of colors, sizes, and other characteristics. The selections in the 1999 trials illustrate the range of sunflowers available. As a group, the sunflowers did well in the trial and were noted for their short crop times, drought and heat tolerance, and strong stems. *Helianthus* 'Double Shine' was the highest ranked flower in the trial with its large, fully double, golden yellow flowers. *Helianthus* 'Ikarus' had a dark center and light yellow petals, 'Ring of Fire' was a bicolor with bronze red bases to the gold petals, and 'Solé' was light yellow with dark yellow ring. *Helianthus* 'Prado Gold Improved' has medium-sized, dark centered flowers with golden yellow petals and is a heavily branched plant suitable for pinching. *Helianthus* 'Sunbright Supreme' is an updated version of the popular original 'Sunbright' with dark centers and gold petals. Several respondents noted the improved version flowered 7 to 10 days earlier and was slightly shorted than the original Sunbright. Benary's Experimental Pollenless *Helianthus* varieties also did very well in the trials; all had dark centers and dark yellow to gold petals and were somewhat similar in appearance. I am sure Benary will let us know if they plan to introduce any of the varieties as many of the trialers wanted to grow them again.

Two other cultivars also did well in the trials this year. The unusually rich purple color of *Lobelia* 'Compliment Purple' made it stand out. While lobelias can be a bit challenging to germinate and grow in some areas of the country, a well-grown lobelia is a knock out and 'Compliment Purple' was considered by a couple of the trialers to be the best in the series.

Color was again the selling point for *Scabiosa atropurpurea* 'QIS Formula Mixture' with a color palette ranging from pastel pink to blue to dark purple. These long flowering, easy to cultivate plants are insect and disease resistant and heat tolerant. The plants are very productive which was both a blessing and a curse because they can be slow to pick.

Based on trial results, the top five performers are automatically nominated for the ASCFG Cut Flower of the Year competition. The rankings are based on the combined ratings score: market appreciation + repeat again + ease of cultivation. Thus, from the 1999 trials Helianthus 'Ring of Fire', 'Double Shine', 'Prado Gold Improved', and 'Sunbright Supreme' and Lobelia 'Compliment Purple' are nominated as Cut Flowers of the Year and will join other nominations from ASCFG members and from the Cut Flower of the Year Panel. Experimental varieties are eligible for nomination if they are named and released.

**Disclaimer:** The numbers reported are averages of all the respondents and many factors will affect the success of any plant species. Our participants are growing and harvesting the trial plants in a wide variety of ways. For example, with annual asters some people harvest the entire plant as one bunch while others harvest each individual flowering branch, giving very different lengths and yield data. If a plant does well for most of the respondents, it is likely to do well for you. On the other hand, if a cultivar didn't appear to do well in the trial, it may still be a great cultivar for you. Thus, we have included summaries of the respondents comments to help interpret the data. In summary, review the trial results carefully. If a species sounds interesting but did not appear to do well, try it anyway. The cultivar may work well for you.

**Acknowledgments:** A hearty thank you to all of the evaluators who returned their trial reports and to the seed companies for providing such great cultivars. I would also like to thank Leah Aufill for plant care, data collection, and analysis and Stephanie Larimer and Rhiannon Battles for their assistance in preparing this report. In preparing the report I have edited evaluator's comments for space and clarity; my apologies if I've altered the tone or content of anyone's comments. Thanks to everyone for making this service of ASCFG possible.

## **Participating Seed Companies**

Benary Seed  
1444 Larson St.  
Sycamore, IL 60178

Pan American  
P.O. Box 438  
West Chicago, IL 60186

Kieft Seeds  
2209-B Bulson Rd.  
Mount Vernon, WA 98274

Sakata Seed America, Inc.  
18095 Serene Dr.  
Morgan Hill, CA 95037

## **Participating Growers**

Frank and Pamela Arnosky  
Texas Specialty Cut Flowers  
Wimberley, TX

Douglas and Gloria Austin  
Austin Gardens  
Flushing, MI

Leah Aufill/John Dole  
Oklahoma State University  
Stillwater, OK

Phil and Dorothy Bartlett  
Bartlett's Ocean View Farm & Greenhouses  
Nantucket, MA

Robert Berghage  
Pennsylvania State University  
State College, PA

Gord Bonisteel  
Stokes Seed Inc.  
Buffalo, NY

Barbara Cospers  
Cospers Flowers  
Highlands, NC

Mimo Davis  
Wild Thang Farm  
Ashland, MO

Priscilla Emerson  
Blue Castle Farm  
Warren, ME

Jeff Hartenfeld  
Hart Farm  
Solsberry, IN

Betsy Hitt  
Peregrine Farms  
Graham, NC

Cathy Jones  
Perry-Winkle Farm  
Chapel Hill, NC 27516

Nancy Kapelak  
Garden Offerings Flower Farm

Huntley, IL

Sharon Hampton and Phillip Katz  
Pan American Seed  
Santa Paula, CA

Susie Lawrence  
Sand Creek Farm  
Braggs, OK

Judy Low  
Molino Creek Farm  
Davenport, CA

David and Jan McHughes  
A & L Greenhouses  
Owasso, OK

Anna Miller  
Quarry Farm  
North Baltimore, OH

David and Judy Neave  
Chelsea Farms  
Onancock, VA

Karen Pendleton  
Pendleton's Country Market  
Lawrence, KS

Carolyn Ramsbotham  
Ramsbotham's Riverview Farm  
Madbury, NH

Vicki Stamback  
Bear Creek Farms  
Stillwater, OK

Ann Trimble  
Trimble Field Flowers  
Princeton, KY

Jeanne Vana

Waiialua, HI

Cheryl Wagner  
Wagner's Homestead Farms  
Belleville, MI

Kim Wickwire  
Olds College  
Olds, Alberta

Thomas Wikstrom  
Happy Trowels Farm  
Ogden, UT

Lulu Wooten  
Cape Farm  
Marlboro VT

## Trial Results

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Cultivar	Yield (stems/plant)	Stem length (inches)	Market appreciation rating <sup>Ø</sup>	Repeat again rating <sup>Ø</sup>	Ease of cultivation rating <sup>Ø</sup>
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### Benary Seed

<i>Allium</i> Experiment No. 1	0	16.0	1.5	2.3	2.0
<i>Allium</i> Experiment No. 2	0	16.0	2.0	2.0	1.8
<i>Allium</i> Experiment No. 3	1.5	15.7	2.3	2.6	3.4
<i>Chrysanthemum carinatum</i> 'Merry Mixture'	7.0	13.7	2.7	2.6	3.9
<i>Helianthus annuus</i> Expt. Pollenless No. 1	1.2	46.9	4.2	3.9	4.9
<i>Helianthus annuus</i> Expt. Pollenless No. 2	1.3	47.3	4.0	3.9	4.7
<i>Helianthus annuus</i> Expt. Pollenless No. 3	2.2	34.5	3.9	3.6	4.5
<i>Helianthus annuus</i> 'Ikarus'	4.5	24.9	3.7	3.5	4.6
<i>Helianthus annuus</i> 'Ring of Fire'	5.4	22.2	4.1	3.7	4.8
<i>Helianthus annuus</i> 'Solé'	4.6	25.7	3.3	3.3	4.6
<i>Lobelia speciosa</i> 'Compliment Purple'	5.8	17.1	4.0	4.1	4.1
<i>Sidalcea hybrida</i> 'Partygirl'	5.8	19.5	3.4	3.2	4.1
<i>Verbascum phoeniceum</i>	3.1	15.3	3.0	2.3	3.9

### Kieft

<i>Chrysanthemum vulgare</i> 'Gold-headed Sticks'	7.4	32.8	3.7	2.9	4.1
<i>Helianthus annuus</i> Double Shine'	5.0	27.9	4.3	4.2	4.5
<i>Limonium</i> 'Mellow Yello	6.4	12.5	3.3	2.8	3.5
<i>Salvia horminum</i> 'Marble Arch Blue'	18.4	13.6	3.9	3.3	4.5
<i>Salvia horminum</i> 'Marble Arch Rose'	18.5	17.8	3.5	3.2	4.4
<i>Salvia horminum</i> 'Marble Arch White'	20.3	14.0	3.3	3.3	4.4
<i>Scabiosa atropurpurea</i> 'QIS Formula Mix'	16.7	18.5	3.9	3.6	4.0

### Pan American

<i>Callistephus</i> 'Meteor Mix'	5.0	13.9	3.6	3.4	4.3
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<i>Callistephus</i> ‘Meteor Rose Pink’	5.7	15.2	3.4	3.4	4.1
<i>Helianthus annuus</i> ‘Prado Gold Improved’	4.8	24.0	4.4	4.3	4.2

## Sakata

<i>Helianthus annuus</i> ‘Sunbright Supreme’	2.0	30.3	3.7	3.5	4.6
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Ø1 to 5 scale, with 5 being the best.

## **Summary of comments**

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The number in the parenthesis refers to the number of respondents who made the comment. If no number is present, then only one person made the comment. Comments by each individual respondent are separated with a ';'. Note: many people did not make specific comments on each cultivar and comments in some cases have been shortened and/or combined because of limited space or similarity to the comments of other participants.

### **Benary Seed**

#### ***Allium* Experiment No. 1**

**Good Qualities:** Healthy plants; Once germinated it is easy to grow in the field. It is very slow to take hold and establish.

**Problems:** None (2); Slow to establish (3).

**Additional Comments:** No flowers this year (6).

#### ***Allium* Experiment No. 2**

**Good Qualities:** Healthy plants.

**Problems:** None; Slow (3); Spotty germination (2); Harder than other 2 varieties to get started, once established it grows well; Poor establishment; Very small plants.

**Additional Comments:** No flowers this year (3).

#### ***Allium* Experiment No. 3**

**Good Qualities:** Long vase life; Interesting shape, strong stems; Once established a nice plant; Well established.

**Problems:** Not enough stems per plant and not very long; None; Germination very slow but steady for 4 weeks; Slow to start and establish; I could not get the plants from this seed to exhibit any vitality. Germination was also poor; Starting to show heat stress (8/11); Low germination (60%), slow to produce; Did not flower.

**Additional Comments:** Will not grow again (2); I grow another allium (the name escapes me) that is wonderful! Lot of stems, lasts long in a vase, and stems are fairly long–10-12"; This plant germinated, smelled and looked like common chives; Not worth the effort; Got some attention at Farmers Market. Customers did not know what they were. Did straight bunches and mixed. Both sold before other bouquets did; Will try to winter over by mulching with straw, despite its an annual. Refrigerated flats from 2 to 4 weeks before growing in greenhouse. Germination fair in all; No flowers.

## ***Chrysanthemum carinatum* ‘Merry Mixture’**

**Good Qualities:** Great color combinations and unusual patterns (4); Flowers are pretty awesome!; Daisy-like with different foliage. Holds up well in arrangements; Great keeping quality. Mixed well with many other cuts and was also sold by itself; Easy to spot good lowers. More vibrant, bicolors interesting. Filled in space around it, easy care; Good vase life; Have a friend that dried them - she uses short stems. Dried great; Good germination.

**Problems:** Too short (5); The bugs loved this one. They chewed the blossoms so badly (what few appeared) that I was able to cut none. I also think they did not like the dry summer; First planting burned up in field. Second planting stems too short. Will grow again next year; They were really hard to pick because they bloomed so heavily. You really had to look closely to see which were useable or too mature; Same bug chewed on buds and a lot of flowers were missing petals. Older flowers faded. Some colors were dull, uninteresting. Fell over in winds, definitely needs staking/netting; stems brittle; Almost melted down in heat; long time between blooms on each plant; Gets tall and bushy - needs space; The rabbits loved it, they ate it all off, it came back, but by then was too short and bushy.

**Additional Comments:** Color combinations reminded me of Persian Carpet Zinnia which also had great keeping qualities; This was worst flower I have ever grown. Even after the bugs left and everything else recovered and flowered well, these guys were still doing nothing!; Too many other items to grow other than this item; Probably a good crop for bouquet use but my retailers did not care for it. Might have gotten taller but I couldn't justify irrigating it; Blooming time seemed short—about 3-4 weeks. Once very hot and dry weather started, the plants appeared to slow in production; The flowers had “old fashioned”, homey appeal; Think different cultural practices should held stem length; Too few and small flowers on a stem to be a marketable cut flower; I will try them again because of great color.

## ***Helianthus annuus* Experimental Pollenless No. 1**

**Good Qualities:** Good yellow color (7); Good flower size (2); Large flower heads (2); Attractive, longish petals. A bit earlier than other sunflower cultivars; Clear, good stem length; Stem length. Germination good. Customers appreciate. NO POLLEN!; No lodging after big storm; Good form.

**Problems:** Dry summer—maybe it didn't get as tall as it should have; A number of flowers had ‘misplaced’ petals growing out of the center; Blew over in the wind; Variable colors; Not as uniform flowering as some.

**Additional Comments:** Similar to ‘Sunbright’; Similar to Superior gold; Deformed heads. Not good in wind. Would be expensive to ship—heavy stems; Sprayed fungicide and was quite clear of insects and diseases; Flower diameter is 4" - 7" at 12" x 12" space. Could be planted closer; Best pale yellow I have seen; The best of the 3 Benary experiments. I'd grow it again.

## ***Helianthus annuus* Experimental Pollenless No. 2**

**Good Qualities:** Good color (7); Good flower size (3); Large flower heads (2); Sturdy; Heads held up-right, some branching; Attractive dark center; Good stem length, direct sow, had good stem vigor; This sunflower was very nice. Wish I had hundreds more to sell. It bloomed in 48 days; No lodging after big storm; Single stem, gold/dark disk and yellow/light disk; Customers like pollenless; Very uniform; Standard sunflower;

**Problems:** None; Blew over in the wind; Pollen, variable color; About 30% of late crop had deformed heads, semi-split into two heads.

**Additional Comments:** Similar to 'Sunbright'; Similar to 'Superior Gold'; Sprayed fungicide and plants were free of insects and diseases; Flower diameter is 4" - 7" at 12" x 12" spacing. Could be planted closer; OK but nothing special; No better than others on the market.

### ***Helianthus annuus* Experimental Pollenless No. 3**

**Good Qualities:** Good dark yellow color (7); Large/good flower size (4); Heat and drought tolerant. Held up well in the field (a favorite with grasshoppers). Also good vase life as a cut; Very tall plant; Attractive dark center. This version (#3) was quite a bit shorter than others (#1, 2). This made harvest easier; Strong stem; No pollen, great!; No lodging; Gold/dark disk, single stem; Good color, customers like pollenless.

**Problems:** Slightly slower to get any height to them, but quality of blooms was good; Branched about 3' from the top. Heads fell over. Not a good cut flower; Bugs, as with all sunflowers; Small percent lodging after big storm; Uneven flower size, has pollen; Heads pretty large for vase work; Not as uniform flowering as some; Very short, late crop had cupped flowers.

**Additional Comments:** 8-10" heads were huge, held color well in heat. Very heat and drought tolerant. Thick stems, long lasting as a cut flower. Did have a tendency to lodge in windy conditions. Overall, very good. Experienced some leaf burn, but we had weeks of 100/F + temperatures, high winds. Note - no fertilizer used, no chemicals either; It's at least 7-10 days later than experimental No. 1 and No. 2. If you plant them all at the same time, you'll get a staggered crop; It was nice to have varying size in same colors—made for nice arrangements; One flower per stem.

### ***Helianthus annuus* 'Ikarus'**

**Good Qualities:** Good light yellow/lemon color (6); Wonderful, dark velvet eye, upright radials, long lasting as cuts. Very strong stems, good diameter. Heat and drought tolerant. Exceptional flower heads 5-6" across; Definitely growing next year; Great flower head posture (for use in mixed bouquets). Better than average resistance to leaf fungus. Good stem length. Good plant size. Good flower head size; Germinated well in greenhouse and direct sow in field even with record breaking drought in my county; Many heads; Great stem length. Strong stems; Grew well, good shape, branches useful; No lodging after big storm; No rust, very uniform, good proportion of petals to disk. Purity of color is consistent throughout petals. Pollenless, small leaves.

**Problems:** Color too light (2); Too short (2); None; Lighter petal color seems to attract more bugs than darker, gold colored sunflowers; Just never looked very good for us. Seemed to be insect

prone; Blends with other sunflowers, not appealing by itself. Not much market demand. Axillary branches (good for home garden) cuts; Like Valentine, this variety does not like our soil.

**Additional Comments:** I would grow these all year long. Pure yellow color is exquisite for a fresh cut. One of my favorites out of all I have grown. No fertilizer or chemicals used; We will grow again next year; Didn't hold very long after cut and tends to fall over in field; Nice multi-bloom sunflower.

### ***Helianthus annuus* 'Ring of Fire'**

**Good Qualities:** Good consistent bi-color (6); Strong stems (2); Easy to grow; Very attractive, smaller side branches useful, one long lasting cut flower, heads held upright; Productive. Stem size length good for mixed bouquets. Disease resistance better than some other sunflowers; Striking; Nice contrast of color (bronze and yellow). Especially accepted in fall arrangements. Mixed well with orange colored dahlia and zinnia; Moderate market demand. No lodging after big storm; Good side branching - long enough to cut; Pretty, different; Golden yellow with red center, good for fall sales, possibly with a pinch.

**Problems:** It seems that our market doesn't appreciate the red color on sunflowers in general. Nice plant, just not popular; None; First bloom not very large; Plants are somewhat short. Probably this would be different in a non-drought year; Deer loved it! Too dark of color for our mix; Didn't seem healthy—I'll probably try it again; Was better accepted in fall arrangements than summer. No problems with disease or bugs; Main flower and side shoots all ready at once, this could have been due to our excessive heat this year; Has pollen, axillary branches.

**Additional Comments:** Similar to Autumn Beauty; Would grow again in a heartbeat; May have been more appreciated if grown in fall; Two-thirds died; Great color, nice stems.

### ***Helianthus annuus* 'Solé'**

**Good Qualities:** Good color - bright yellow/dark yellow ring in center (5); Nice for large bunches; Many, many stems, good stem strength; Nice size flowers. Good branching on top with side stems; No problems with disease or bugs; Good color; Early flower, very distinctive.

**Problems:** Low market demand for light yellow sunflowers (2); Plants were the weakest of all our sunflowers (19 cultivars). Weak growing. Very susceptible to the variety of leaf problems sunflowers get in the humid Midwest. Lighter color petal attract more bugs (more damage); Just didn't seem to be as nice and look as good as our regular one we use. Side shoots too short for cuts; Bad rust, axillary branches (good for home garden cuts); I'd grow this one again. Great in bouquets.

**Additional Comments:** Prado Gold would be a good substitute for this one.

### ***Lobelia speciosa* 'Compliment Purple'**

**Good Qualities:** Great color (7); Unusual shape, good holding quality; Vase life; Just cooked in the heat! Very hard to germinate; Nice flower form; Tall stems and vigorous plants; good production; Very good germination, vigor; Much more useable as cuts than other Lobelia I have grown.

**Problems:** Poor germination (2); Second cuts short; Lost to weeds; Poor survival; Bit slow to flower.

**Additional Comments:** Sold at Farmers Market instantly; Crop received insufficient water to grow good stems; Not much this year. Second year performance should be improved; This is the best in 'Compliment' series. I would like to see it available ASAP.

### *Sidalcea hybrida* 'Partygirl'

**Good Qualities:** Bright pink/light purple color (3); Held up well in a vase (2); Unique; Lots of bloom; sturdy flower stems (2). Nice color; Good spikes; Nice flower, added something different to bouquets.

**Problems:** Flowers too small (3); Deer loved it and that might have affected its height; Getting germinated; Plants are melting down from heat; Hard to know when to cut, questionable vase life; Low germination; Not tall enough, maybe would do better if planted earlier and kept cooler.

**Additional Comments:** I really liked it. It is pretty, easy to grow, prolific, good in bouquets, keeps on coming and my customers liked it; Would have to think about whether to waste the space on this plant. Perhaps next year's flowers will be better, if they survive our winter; Stored in flats, March 13, refrigerated for one month, moved to greenhouse, gave heat on bottom of flat. Excellent percent germination and quick - 2 to 3 days. We will grow again next year; A lot of people like it, but culture needs help getting started. Didn't like the heat; Tall flower spike. Not suitable for drying. Put in field in April. Bloomed a little, but stalks not big enough for the cut flower trade. Maybe it will be bigger next year; Easy to grow, stems around 16", blooms at different points up stem, no definite blossom period.

### *Verbascum phoeniceum*

**Good Qualities:** Good colors (5); Easy to grow (2); Not many; Healthy plants; Would make nice looking bunches if there was any production; Good germination. Nice plants. Bloom stems were pretty; Colorful, size, germination; Excitement from those seeing it in the garden, always good to have spike flowers for bouquets.

**Problems:** Too short for a spike flower (4); Not enough flower open on spike at same time (3); Flowers wilted or shattered too easily (2); I had a hard time trying to decide when to cut. Did not hold up well in a vase; None so far; Minimum bloom on first year plants would make it difficult to grow this one as an annual. Maybe next spring it will be a heavy producing biennial? Not a great stem/flower shape for mixed bouquets; A little late to bloom, may be to heat; Not like wild verbascum up here; Plants seem to be melting in heat. Seed set on spike; Poor vase life.

**Additional Comments:** Similar to 'Southern Charm' (2); I was not impressed with this one; I expect very beautiful flowers from it in the spring of 2000. However, have had marginal success postharvest with the Verbascum. Need work on how to condition to get good vase life; Looking forward to next year, if they survive winter; Like a lot; Even though we have not had measurable rain for months some

of these are still alive. Tough; Hoping flowers will be taller next year; Not much this year. Will probably improve next season.

## **Kieft**

### ***Chrysanthemum vulgare* ‘Gold-headed Sticks’**

**Good Qualities:** Its yellow and I always need more yellow; Great foliage and bright color. Holds great. Once flowers gone still great for foliage; Well liked, easy sell; Very easy to establish; Undeterred by weeds and drought, no staking needed; Uniform, easy; Bright gold, good stems.

**Problems:** It falls over and “geotrops” badly. It takes up more room than it’s worth; Bugs loved it to my surprise. It did not bloom as heavily as I expected considering how lush the plants were. Needed more water than I expected; Wilts at market. Plant too aggressive and produced very little for area. Very slow to flower.

**Additional Comments:** Similar to Common Tansy (4); A 10 in my books!; Perhaps would do better with less care; Interesting flowers but plants not uniform, 1 plant in flower, 2 almost in flower, 3 with no flowers in August; Since it is a perennial, the stems will be much longer, and the number of stems per plant much greater the 2<sup>nd</sup> year; Slow first year growth.

### ***Helianthus annuus* ‘Double Shine’**

**Good Qualities:** Great color (3); Double (3); Customers loved it (2); Good flower size (2); Tallest stems of all my sunflower trial seeds, sturdy, thick stems, large flower heads, good looking double-rowed flowers, 6" across on heads branched when cut, with short internode length (6" or so). Great character; Stands out for miles around! Customers couldn’t get enough. It’s a winner; Long vase life. Heads held up or out. Attractive; Flowers just kept coming; A very strong growing double sunflower. Good size plants. Beautiful flowers. Also dries well; Liked the branching and cluster at top. Liked double centers. Produced long into season; Nice flower, unusual; Highly marketable; Looks very good.

**Problems:** Not as heat or drought tolerant as other cultivars, but still a good performer; None; Didn’t like it at all. Customers wouldn’t touch it; Rust in foggy areas, disease on leaves. Stems can be thick and heavy. Took a long time to bloom due to cool summer; Very susceptible to rust; Small plants, branched, semi-double flower.

**Additional Comments:** Similar to Goldburst (2); Similar to Teddy Bear; No fertilizer or chemicals used. They just kept blooming each week. Customers at Farmers Market looked for these. Other flower growers there wanted to know where I got seed, told her nothing!; Had trouble figuring out when to cut; Long bloom period all August into September; Goldburst is far superior to this cultivar;

### ***Limonium* ‘Mellow Yello’**

**Good Qualities:** Something different for a filler; Took heat well. Nice contrast of yellow and white. Many useable stems; Less common color, but did not sell well; None that were obvious, but I think this might have been due to our very dry growing season; Easy to grow, very attractive color; Good yellow color, not so gaudy yellow like some statice; No botrytis.

**Problems:** Stems brittle and thin; About every 6th plant didn't produce; I only got 1 stem from all the plants I planted. Some had not matured by the time I was done for the season. The one I did get was pretty but hardly worth the effort; Very cool wet year, even under black plastic mulch. September 13, still waiting for blooms; Seeds difficult to germinate. Plants did not survive one week in our hot, dry field even with watering by hand and special care; Short stem on 1<sup>st</sup> flower; Came on late, so didn't beat the heat, and bloomed short.

**Additional Comments:** Will not grow again (2); Nothing germinated; Heavy setter; Stems per plant uniformity could be improved; While my regular annual statice crop was normal, these statice plants stayed small, with unusable bloom stalks. (Drought may have been the cause); Similar to Lace Veil Statice.

### ***Salvia horminum* 'Marble Arch Blue'**

**Good Qualities:** Good blue color (5); Easy to grow (3); Excellent vase life (2); Quick growing. Good filler; Many stems; Retail florists liked this crop which surprised me; Great accent to bouquets; Good color contrast between green and purple; plant habit, overall appearance; Very attractive and appealing to farmers market customers as a fresh cut; Early, strong stems, adds interesting color to bouquets.

**Problems:** Too short (2); None; When the weather got hot, this saliva sort of dried up on the plant; Color starting to fade, first cut had very little color showing, the side shoots aggressively filled in but are too short. Have melted down from heat; Slow to germinate; The moment hot weather really set in (mid-July), 90% of the plants turned brown and quit, some revived and re-bloomed in October, I suspect it likes colder weather; Growth habit, stems not straight;

**Additional Comments:** Similar to ordinary *Salvia horminum*; Similar to Clary sage; Likes the cool spring even in 30/F. Grows quick, nice filler for bouquets with the best selling color. Two month crop from planting plants to cutting. We will grow again next year; Good hold, took heat very well; Plant seemed stressed when hot, dry weather came and production was greatly slowed; Not great cut flower; Nice purple. Interesting plants for a different cut flower look. Stems a bit short. Makes a good filler; Grow it if you have an early October flower market (get it in the ground early); Grew vigorously and bloomed profusely. Would be pretty as a bedding plant, but not great as a dried flower. It might do as a cut flower for small bouquets. Stalks were too delicate when dried. I have sometimes used this variety for pressed flowers, but it's hard to make a living that way. Just a note that there were several white and pink plants mixed in with the blue seed.

### ***Salvia horminum* 'Marble Arch Rose'**

**Good Qualities:** Great color (7); Picked as a bunch per plant; Interesting ‘flowers’. Blooms early when not much else is happening. Would be good bedding plant, not a cut flower; Vase life, height; Easy to cultivate; Straight stems, all stems good sized and used unusual “flowers”–actually leaves; Overall plant appearance; Early.

**Problems:** Too short (4); None (2); Flowers seemed to brown on edges unless picked immediately; Color may fade in intense sun; Contrast of rose to green in mediocre. Have melted down in heat. Slow to germinate; Too branching, no good stems; Poor stems due to growth habit; Does not produce as well as the blue.

**Additional Comments:** Similar to Clary; They all look alike; Would have to think about planting again. Somewhat washy rose color, others vibrant; All colors did okay in our cold wet summer; Very well liked!; Not good cut flower; Interesting cut; Nice landscape plant.

### ***Salvia horminum* ‘Marble Arch White’**

**Good Qualities:** Good color (2); This would be excellent in a garden; Interesting ‘flowers’; Blooms early (good); Vase life; Nice flower basket fill. Many stems. Stayed more upright than blue; Overall plant appearance

**Problems:** Too short (2); Insufficient color or color washed out (2); The shape and form of this plant does not lend itself well to our mixed bunches because of the bract formation, the actual flowers are lost by the time the bracts form; Did not germinate in the field; None; Poorest color contrast of the 3 salvias. Have melted down in heat; Slow to germinate.

**Additional Comments:** A little weak in color for white/cream; Not great cut flower; Needs another color mixed in to work. A good filler cut. Stems a bit short; A few rose plants came up too - bouquets with the 3 colors mixed were very popular.

### ***Scabiosa atropurpurea* QIS Formula Mixture**

**Good Qualities:** Excellent colors including pastels (6); Strong growing plants (2); It’s not as rangy as other scabiosa we have grown so it’s less likely to need staking. We sold solid bunches in our market. Shoppers have never purchased solid scabiosa before, but they did this year. I think the range of colors was gorgeous; Very pretty. I have grown annual Scabiosas before and I love them. The colors are great and if cut at the right time will last well in a vase; Striking red and white in the mix; Took heat well. Disease and insect free; Scabiosa does well here; People at market like this, makes a good filler on first cut, then many stems to come that are single. Slowed down in last few weeks but has produced endlessly; Good stems, maybe better than Imperial mix, nice red; Really different, pretty, drought resistant, long-blooming; Customers always like the colors and shape of scabiosa; Large flower.

**Problems:** Did not germinate in the field; Very tangled bloom. Slow to pick. Stems tended to fall over; Stem a little weak; Scabiosa barely sells at all to my market. They are totally unappreciative; Lodged (few plants) after big winds; Not much of a color mix, all I got was red and blue; Variable size of colors (some too short to be useful at market) plants flopping, and producing crooked stems.

**Additional Comments:** Good uniformity; One plant left, all the rest eaten by rabbits. The plant that survived was nice; Best used in mixed bouquets; This is the best scabiosa we've grown. The coral shade is very nice.

## **Pan American**

### ***Callistephus* 'Meteor Mix'**

**Good Qualities:** Great colors (3); Very bright flowers, Great straight bunched and excellent in bouquets; Hardly any aster yellows disease. Consistent yield; When whole stems were cut, they added great fullness to bouquets; Very showy. Takes only a few stems for a nice bunch; Great Asters - not very susceptible to aster yellows. Large flowers, great for wedding work. Good vase life; Very uniform, good stems.

**Problems:** Aster yellows (3); Our very dry summer may have caused the plants to grow abnormally. Many stems, but very "clumpy"; Drought all summer, therefore, no height; None; Didn't do well in cold wet conditions; Rust appeared in hot, dry weather. Drip irrigation just wasn't enough; Black beetles kept eating the petals, which explains the poor yield; No white in the mix, more blue than pink; Hot temperature, so bloomed short, many pests.

**Additional Comments:** Similar to Matsumoto; I'm more inclined to suggest that this makes a better garden plant than cut flower. The ultra thick stems are hard to cut; If irrigated, flowers were about 3" /4" across, while non-irrigated flowers were about 1 1/2". Colors were rosy pink, blue, white. Pink/Blue received, white okay. If you need a big splash of color or an eye catcher in a bouquet, this is the flower to grow; I like 'Serenade' series much better, more useable stems; A nice aster for cuts; Nice flowers.

### ***Callistephus* 'Meteor Rose Pink'**

**Good Qualities:** Nice pastel color (3); The drought closed us down in July but I can say these aster plants were the strongest and out lasted 8 other varieties we planted. Not one of our total of 1400 asters lived to produce flowers. What a year!; Consistent yield. Hardly any aster yellows disease; Good size flowers. Neat, tall, did not fall over. Easy to harvest whole plant.

**Problems:** Our very dry summer may have caused the plants to grow abnormally. Many stems, but very "clumpy"; Didn't do well in cold wet conditions; Same rust problem as mix variety; No problems.

**Additional Comments:** I'm more inclined to suggest that this makes a better garden plant than cut flower. The ultra thick stems are hard to cut; I like 'Serenade' series much better, more useable stems; We will grow again next year; Again another nice aster cut; Loved it; Nice flowers.

### ***Helianthus* 'Prado Gold Improved'**

**Good Qualities:** Good color (6); Good flower size (6); First blooms July 7. First of trial seeds to bloom. Huge flower heads 6-8" across; Nice small flowers for bunching alone or with other large flowers; Long lasting, head's point up or out; Consistent color and growth produced crop that flowered very uniformly; Yield; Good bug damage resistance. Good strong stem. Reliable hold; Good; Very nice sunflower.

**Problems:** Lodging; Worst at lodging of all sunflowers grown this year; The branching habit could be a problem if you wanted large single blooms—then you'd have to pinch them; Weak stems; None; Height, stem size and small flower for a yellow sunflower; Harvest period is spread out with last few hanging on.

**Additional Comments:** Similar to Sunbright; Amazingly drought tolerant and heat tolerant. We had weeks of 100/F + temperatures and after 4 weeks of 100/F + days and little water, they finally began to show stress in the leaves, burned margins. No fertilizer or chemicals used; Last one picked the end of September when other growers had none. Used as focal flower in mini bouquets and with a short grass tied with raffia; Not uniform.

## **Sakata**

### ***Helianthus* 'Sunbright Supreme'**

**Good Qualities:** Strong stems (3); Large heads (2); Uniform flowering (2); Earlier than Sunbright by 7 to 10 days (2); Early flowered in 50 days; Attractive stem color, flower heads approximately 4" across; Will definitely grow again next year; Seems pretty much like 'Sunbright'; Stems stronger and a little shorter than Sunbright; Good contrast of colors; Excellent flower size; Good color and overlapping petals.

**Problems:** Not as much interest in these, most consumers I spoke with would rather have 1 larger bloom over 4-5 smaller off-shoots; Not enough breaks. Seemed to be nutrient deficient. My customers didn't like the color; Variable timing; A little short, cupped flowers;

**Additional Comments:** Similar to Sunbright (2); Smaller diameter of branching stems, but branching stem length 12-14"; Didn't seem to bloom earlier than 'Sunbright'; One flower per plant; This plant was a little more "coarse" or stocky than 'Sunbright'. I prefer 'Sunbright'; Looks like many other cultivars but was really early.