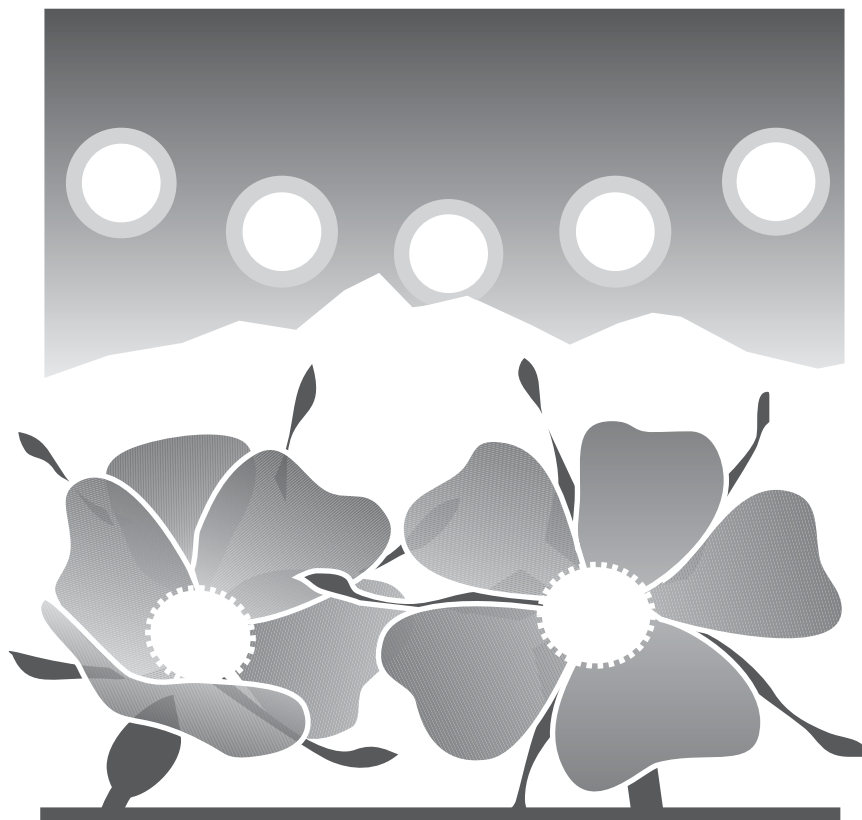


Annual Flower Evaluations 2003



GEORGESON
BOTANICAL GARDEN

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Introduction

Each year approximately 300 annual flowering plants are included in the tests at the Georgeson Botanical Garden. The current year performance is reported in Tables 3 and 4. Cultivars are tested for three years, not necessarily consecutively. Final three-year average performance is outlined in Table 5.

The annual flower trials were planted from 29 May through 6 June, 2002 in the Perennial Landscape and All American Selections Display Garden of the Georgeson Botanical Garden (64° 51'N, 147° 52'W). Fairbanks silt loam soil was fertilized with 10-20-20S (4 lbs per 100 sq. ft., 195 g per sq meter) on 29 May. Flowers were grown as seedling transplants and were hardened off outdoors for one week prior to transplanting.

All cultivars were planted according to recommended commercial spacing guide lines in unreplicated beds. Plant numbers varied according to plot size. The granular herbicide Preen® (Trifluralin), was applied on 10 June to all plots. Plots were irrigated as needed throughout the summer. A fungicide treatment (Topsin M®), Thiophanate-methyl) was applied on 21 June and 16 July to inhibit the growth of *Sclerotinia* cottony rot.

Plot evaluations began immediately after planting and continued weekly through September. They consisted of flowering dates and occurrence of disease, insect pests, seed pods, off-type plants, and other deformities. From 25 July to 31 Aug., each cultivar was measured for plant height and flower size, rated for

performance of flowers and foliage, and evaluated for fragrance and potential use as cut flowers or in dried arrangements. Frost tolerance was noted one week after the first frost on 13 September.

Weather data were compiled annually from a U.S. Weather Service station, elevation 475ft (145m), located approximately 350ft (107m) west of the Garden. The last spring frost was 24 May (31°F, -0.6°C). (Table 1). Thaw degree day accumulation was below the previous ten-year average of 3318.9 degree days. The frost free season was two days longer than the previous ten year average.

The weather statistics describe a fairly typical growing season for Fairbanks. All plants grew well, and there were no surprise mid summer frosts. This season did not follow the pattern of the past two seasons where frost did not kill the garden until the end of September. Frost brought the growing season to an abrupt end in mid September. An unusual aspect of this season was the severity of the first frost. Typically, temperatures will drop one to three degrees below freezing, but the 2003 season showed a precipitous drop to 23.1°F (-5.0°C). Many plants that normally tolerate frost, were killed by the severity of the first killing frost. Even many pansies and violas, plants grown specifically for their frost tolerance, showed some damage. This year has allowed us to distinguish among annual flowers that can tolerate deep frost and those sensitive to all but light frosts. This distinction is noted in the comments for individual flowers.

Table 1. Previous ten year weather data plus 2003

Season	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average daily temperature (°F):											
May	51.9	52.0	52.3	44.1	47.8	49	46	44	45	50.4	44.2
June	60.5	57.0	58.5	57.3	61.0	57.8	61	59	56.5	57.6	61.3
July	64.5	62.0	61.9	61.9	63.8	62.2	61	59	60.5	61.3	60.5
Aug	55.5	51.0	55.6	52.1	57.1	52.4	57.5	51.5	57	53.9	55.1
Sept.	42.5	43.0	50.6	41.2	49.6	45.8	45	41	48.5	46.6	40.8
Maximum temperature (°F):	91	89	85	82	87	87	91	83	95	85	82
Growing season:											
Last frost	1 May	6 May	22 May	5 June	25 May	13 May	29 May	15 May	13 May	12 May	24 May
First frost	1 Sept.	23 Aug	4 Sep	27 Aug	19 Aug	13 Sept.	11 Sep	16 Sept	24 Sept	2 Sept	13 Sept
Frost free days	123	109	105	83	86	123	105	124	134	113	112
Thaw degree days*	3547.5	3476.3	3676.5	2810.5	3655.5	3277.5	3383	2943	3439	2980.0	3122.7
Rainfall (inches)	6.67	7.21	10.15	8.73	5.86	9.87	8.66	8.55	5.80	9.35	9.91
Previous winter season:											
Minimum temperature (°F)	-52	-37	-48	-48	-54	-48	-54	-50	-27	-36.3	-34.6
Snowfall (inches)	131.7	36.3	69	47.8	8.4	30.6	31.6	62.2	39.9	39.7	33.2

*Thaw degree days = cumulative (1 May - 30 Sept) average daily temperature minus 32°F baseline.

Table 2. Weather Data for 2001 - 2003

	May			June			July			August			September		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Average daily max. °F	55	64	55	64	69	74	70	73	70	67	64	66	61	57	50
Monthly high temp. °F	69	85	74	95	77	82	82	83	88	77	85	76	68	67	66
Average daily min. °F	35	37	33	49	46	48	51	50	50	47	44	44	36	36	31
Monthly low temp. °F	20	18	27	41	33	40	40	36	41	40	34	39	29	28	17
Rainfall (inches)	0.03	0.48	0.35	0.41	1.30	0.85	3.35	2.71	5.12	1.70	3.71	1.86	0.31	1.1	1.73

Georgeson Botanical Garden Map- 2003

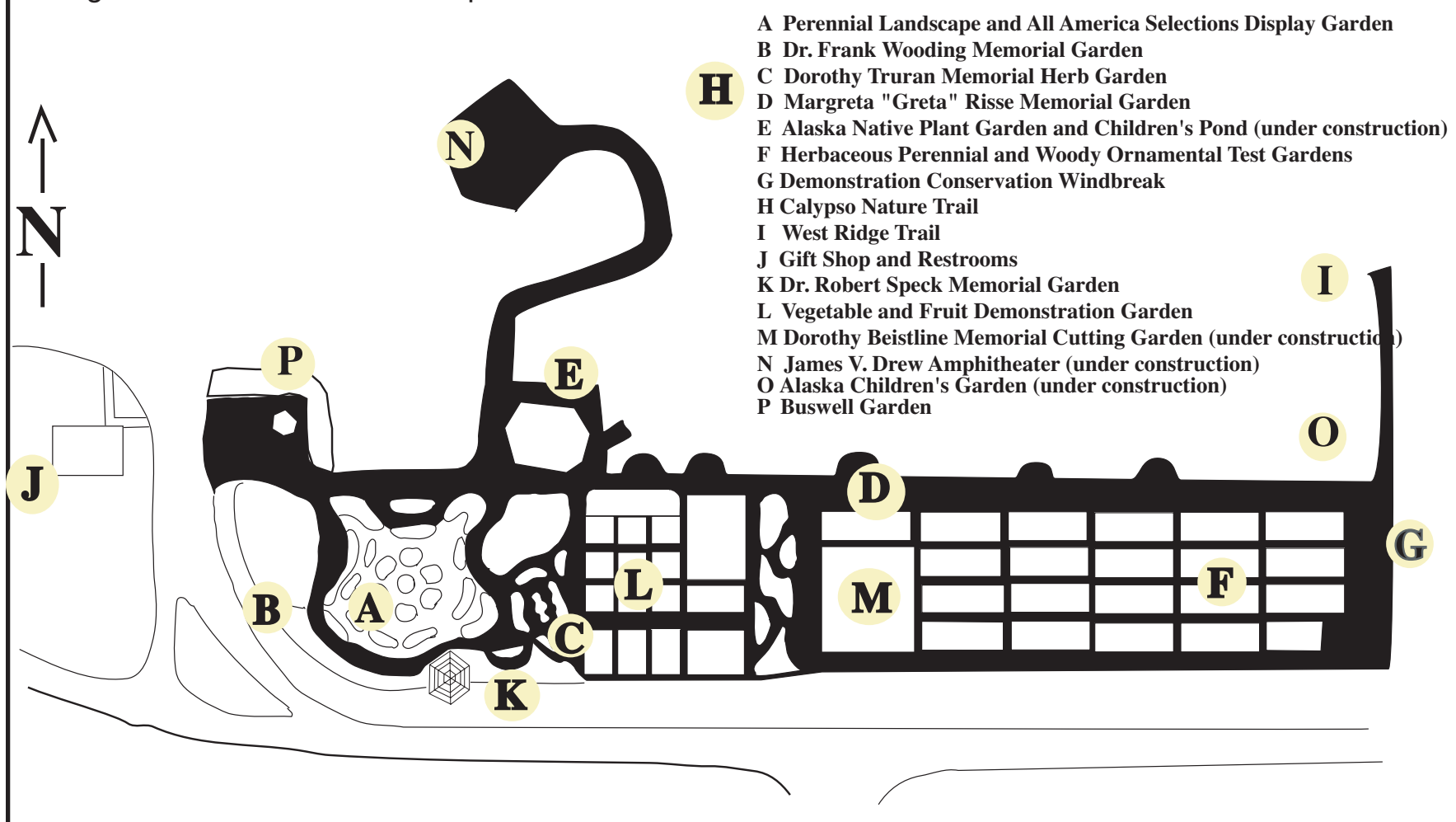


Table 3. Results of tested cultivars for 2003.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y												Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers								
African daisy		cream, orange with brown centers	7	23½	1	2¼					*	☼	☼	☼	☼	☼	☼	☼	n	n
African Lion's Tail		orange	44	60	2½	3													n	n
Agastache	Apricot Sprite	light orange	5½	18	1 x 2	2 x 7	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Agastache	Golden Jubilee	purple	13	23½	2 x 3	2 x 3½	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	y	y
Ageratum	Blue Horizon	lavender	2.5	4	¼	2½			☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Ageratum	Fields Purple	two-toned purple	2¼	5½	¼	1¼		*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Ageratum	Hawaii Shell Pink	pink, rose	2	5	½	1½	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Ageratum	Pearl Royal	lavender	1½	4½	½	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Alyssum	Wonderland Lavender	lavender	1	4½	⅛	¼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	y	y
Asclepias	Ice Ballet	cream	21	27	1¼	1½					*	*	☼	☼	☼	☼	☼	☼	y	n
Aster, Annual	Perser Mix	lavender, rose, purple with yellow centers	10	20	1½	4½				*	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Aster, Annual	Astoria Deep Blue	lavender with yellow centers	19	26	1½	3				*	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Aster, Annual	Compliment Yellow	pale creamy yellow	11	24	2½	4					*	*	☼	☼	☼	☼	☼	☼	n	n
Aster, Annual	Standy Mixture	pink, purple, rose, lavender, white	7	29½	2	3½	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Aster, China	California Giant	white, lavender, pink	5	19	2½	4				*	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Aster, China	Lilliput Blue Moon	two-toned purple/lavender with yellow centers	5	24	1	2¾				*	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Bachelor's Button	Midget Mix	purple, pink, white, rose	5½	8½	¾	1½	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Bidens	Golden Goddess	yellow with yellow centers	10½	26	1	1¾	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Bishop's Flower	Green Mist	white with greenish cast	11¼	25	1	6			*	*	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Blue Lace Flower	Madonna Mix	pink, lavender	6½	26	1	2¼				*	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Blue Woodruff		blue	2	12	¼	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Bupleurum	Green Gold	golden yellow	2	20	¾	1¾		*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Burridge	Philippine	gold with mahogany centers	7	21	¾	1¾		*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Greenthread								*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n
Calendula	Buttermilk Baby	yellow with brown centers	7¼	11	1	2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n

^w if the plant is uniform in height, the height is recorded under max only.
^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.
^y * indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
4	4	4	4	n	y		Billowy floppy stems, plants full of bright blooms	
2	3	3	3	n	y	n	Very tall plant for background plantings, interesting monarda-like blooms in tight whorls around the stem, late but nice, flowers and foliage tolerate only light frost, recommended for spiny seed heads in dried arrangements but they do not develop here	
2	2	2	2	n	y		Not the most showy agastache but interesting color, flowers are tiny, needs mass planting and close spacing for show, Fleuroselect Quality Mark	
3	2	3	3	y	y		Nice bushy plants with yellow foliage, not very attractive, aromatic, not recommended as edible herb, All America Selections Flower Award 2003, works well with lime green and purple flowers	
3	3	3	3	y	y	y	Uneven flower height, excellent color, attracts insects, great mounds of color, excellent for cutting and drying, Association of Specialty Cut Flower Growers Fresh Cut Flower Award 2003	
3	3	2	2	n	n		Buds reddish purple, flowers lavender purple, two-toned color very attractive	
2	2	2	2	y	n	n	Interesting bicolor appearance, buds are dark rose pink, flowers fade to white, lots of brown centers after cold wet weather, needs close spacing for best carpet effect	
3	3	3	3	n	n		Tiny mounding ageratum, outstanding color and form early in season, some browning in rainy cool weather	
3	3	3	3	y	n		Very attractive color, spreads and fills in well, dwarf and very uniform carpet of color, some bleaching of leaves late in season, looks good with lime green and purple flowers	
1	2	2	2	n	y		Just beginning to bloom 1 Sept., tall unbranching upright stems, glossy green leaves, plant is not showy	
3	4	3	3	n	y		Another aster well suited as a cut flower, good mix of colors, looks ragged in late summer especially with rains	
4	3	3	3	n	y		Great daisy-like flowers with interesting color contrast in flowers, large yellow centers, excellent cut flower	
3	3	3	3	n	y		Abundant narrow petals stuffed into large balls, stiff stems great for cutting, does not hold up well in cold weather, ragged appearance late in season, needs deadheading	
3	3	3	3	n	y	y	Abundant flowers on upright straight stems, excellent mix of colors, needs some deadheading especially late in the season	
3	3	3	3	n	y		Great mix of colors, excellent mid-season blooms, needs deadheading after rain, looks ragged after rain and late in season, nice stem length for cutting	
4	4	4	4	n	y	y	Interesting two-toned petals, abundant clusters of purple flowers, stem length great for cutting, holds up well in cold wet weather	
1	1	1	1	n	n	y	Declines rapidly, early flowers are colorful but does not recover well from deadheading, plants die out early, poor seasonal showing	
3	3	3	3	y	y		Holds up well in cold wet weather, nice full open airy plant, great for fillers or background, billow of yellow color, will self sow in the garden, foliage only tolerant to light frosts	
3	4	4	4	n	y		Annual that looks like Queen Anne's lace, large bushy floppy stems, nice old-fashioned flower with ferny foliage, tolerates only light frost	
3	3	2	3	n	y		Weak spreading stems, exquisite "pincushion" flowers in great mix of colors	
3	3	3	3	n	n		Tiny clusters cover the thin stems early in season, finished early, best planted as early season color that is filled in with something else later in season	
1	2	3	3	n	y		Flowers early, not showy, unusual golden color, bushy plant, goes to seed early	
3	3	3	3	n	n	n	Billowy plant covered with gold blooms, wiry floppy stems, excellent edging plant when grown in masses	
3	3	3	3	sl	y		Compact plant covered with blooms, needs deadheading for best show, shortest calendula this season, interesting color, flowers and foliage tolerate only light frost	

^z 0= dead; 1= poor, diseased, rotten or not showy; 2= fair, other cultivars of its kind have been better; 3= good, worth growing, nice ornamental; 4= outstanding quality, the best of its kind grown in the garden.

Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y												Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers								
Calendula	Complete Tall Mix	yellow, orange, cream, yellow with orange tips and mahogany centers	15	25	1	2¾	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Calendula	Flashback	top of petals orange, cream, yellow, bottoms, dark red	11¼	26	1	2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	y	y	
Calendula	Geisha Girl	orange with bronze tips, dark red centers	9½	28½	½	3	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	y	y	
Calendula	Porcupine	orange	10	25	¾	2½	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Calendula	Red Splash	orange, yellow, cream with red highlights	16	25¼	1¼	2½	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
California Poppy	Inferno	electric orange red	11	18	1	3	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
California Poppy	Ivory Castle	creamy white	3	17	½	2½	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	y	n	
California Poppy	Mission Bells	white, pink, orange-red, cream, rose, orange	7	25	¾	2½	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
California Poppy	Thai Silk Lemon Bush	mix of lemon and creamy yellow	13	20	¾	2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Candytuft	Brilliant Mixture	white, rose, pink	2	11½	½	1¼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Candytuft	Flash Mixed	pink, white, rose	10	½	1½		☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Cardinal Climber		scarlet	20	46	1	1½				☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Carnation	Can Can Scarlet	scarlet	7	14	1	2¼								☼	☼	☼	☼	y	n	
Celosia	Fresh Look Red	deep red	9½	15	1½x 2¼	2 x 6					☼	☼	☼	☼	☼	☼	☼	n	n	
Celosia	Fresh Look Yellow	orange-yellow	6½	10½	½ x 1	1½ x 2½				☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Celosia	Glow Carmine	carmine red	4¼	8	1 x 1¼	2½ x 3				☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Centaurea	The Bride	white	8	23	1	3	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	
Cerinth	Bouquet Gold	yellow	20	31	½	1				☼	☼	☼	☼	☼	☼	☼	☼	y	n	
Chilean Glory Vine	Tresco Cream	yellow, rose	72	112	¾	1				☼	☼	☼	☼	☼	☼	☼	☼	y	n	
Chinese Forget-me-not	Mystery Rose	lilac pink	9	22	¾	1								☼	☼	☼	☼	n	n	
Chrysanthemum	Polar Star	white and yellow with brown centers	9	24	1¼	3	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	n	n	

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^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y ☼ indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	n	y		Long stems, great for cutting, nice mix of colors
3	3	3	3	n	y	y	Lots of small mostly double blooms all season, interesting contrast between top and bottom of petals, needs deadheading for full color, will self sow in the garden
4	3	3	3	n	y		Very nice contrast of orange petals with dark brown centers, some recurved petals when young, abundant blooms, needs deadheading
4	3	3	3	n	y		Petals folded under, looks like tubes of porcupine quills, unusual display
3	3	3	3	n	y		Good mix of colors with red highlights
4	4	4	4	n	y	n	Electric flower color, truly a knockout, flowers close up in cold overcast weather
3	3	3	3	n	y		Outstanding creamy white color, nice contrast with dark green foliage, floppy stems, flowers close up in cloudy weather, needs deadheading late in season
3	3	3	3	n	y	n	Abundant semi-double blooms in a great mix of colors, just about the entire spectrum for California poppies, floppy weak stems spread color in large open mounds
3	3	3	3	n	y		Mostly double flowers, floppy stems, outstanding contrast with bluegreen foliage, flowers tolerate only light frost
1	1	1	1	n	n	n	Needs serious deadheading to keep blooms all season, seed pods are not showy, needs close spacing to fill in bed
1	1	1	1	n	n	n	Needs significant deadheading early in season to keep blooms, nice color mix early but becomes leggy and ragged by mid summer
1	1	2	1	n	n	n	Interesting tiny morning glory-like blooms early in season, not a vigorous climber, no blooms late in season, not showy
2	3	3	3	y	y	y	Very late but very nice double blooms, strong upright stems, brilliant color, grey-green foliage, All America Selections Flower Award 2003, foliage looks bleached in cold weather, tolerates only light frost
3	3	3	3	n	n	n	Short spikes of bright red color, plants remain tiny, if spaced close together would provide a good show, grown in raised beds, All America Selections Gold Medal Flower Award 2004
2	3	3	3	n	n	n	Later to bloom than red cultivars, some tops look deformed and twisted, not as showy and later to bloom than the red cultivars, All America Selections Flower Award 2004
3	3	3	3	n	n	n	Short spikes of electric carmine red color, plants remain tiny, if spaced close together would provide a good show, plants were grown in raised beds
2	2	2	2	y	y		Not the best centaurea, nice flowers but overall effect is ragged and floppy, not showy, needs deadheading, flowers are sparse
3	2	3	3	n	y		Rangy floppy flowers not really visible, curled under the foliage, gold color not as striking as purple flowered cultivars
4	4	4	4	n	y	n	Outstanding vine with clusters of bicolor flowers, very ornamental glossy green segmented foliage, as vigorous as scarlet runner bean as a climber, a garden favorite
3	4	4	4	n	y		One of the best of its type tested in the garden, better than the blue cultivars, strong upright stems loaded with flowers, wonderful contrast between flowers and foliage, attracts bees, tolerates only light frost
4	4	3	3	y	y	y	Large attractive flowers on rangy floppy stems, definitely needs lots of space to spread out, flowers and foliage tolerate only light frosts

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y								Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers				
Chrysanthemum multicaule	Yellow Buttons	yellow	2½	16½	½	1	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Chrysanthemum (paludosum)	Snowland	white with yellow centers	6	19	1	1¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼						☼		y	y
Chrysanthemum, Tricolor	Coconut Ice	white with rose markings, rosy pink with brown & yellow centers	5	22½	1½	2¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Chrysanthemum, Tricolor	Summer Festival	white with red markings, yellow with mahogany markings, yellow, white with mahogany centers	10	24	¾	2½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Clarkia	Passion for Purple	purplish pink	5	20	1	1¾	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Cleome	Pink Queen	pink/rose bicolor	27	35	2½ x 5	5 x 6½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Cleome	Solo	white petals, red sepals	11	17	1 x 1½	1¾ x 3	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Cleome	Sparkler Blush	pink, white, rose	18	32	2 x 3	3 x 5	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Coneflower, Branched	Ace of Spades		24	31											y	y
Coreopsis	Mardi Gras	gold with red centers	9	18	¾	1¾	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Coreopsis	Seashells	gold with mahogany centers	12	24	¾	1½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Cosmos	Campus Apricot														n	n
Cosmos	Candy Stripe	pink with magenta edges, yellow centers	23	34	2	3	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Cosmos	Daydream		20	26											n	n
Cup & Saucer Vine			24	48	½	1							☼☼		n	n
Cupid's Dart		blue	15	31	1½	2½									n	n
Dahlberg Daisy		gold with gold centers	4	10	½	¾	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼								n	n
Dahlia	Bishop's Children	red, dark orange, yellow, deep rose with yellow centers	16	29	3	4½							☼☼☼☼		n	n
Dahlia	Bridgeview Aloha	yellow tipped in red													n	n
Dahlia	Citron du Cap	yellow													n	n
Dahlia	Claudette	purplish pink		26	2½	4							☼☼☼☼		n	n
Dahlia	Emma Elizabeth														n	n
Dahlia	Emory Paul														n	n
Dahlia	Garden Princess	yellow with orange highlights		20	3½	4½							☼☼☼☼☼☼		n	n
Dahlia	Gloriosa	bright red	24	30	4	6							☼☼☼☼☼☼		n	n

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^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y ☼ indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z				Recommended for			Comments
Flower quantity	Flower quality	Foliage	Overall	Fragrance	Cutting	Drying	
4	3	3	3	n	y		Billows of electric yellow blooms, well worth growing as edging, closes in cloudy weather
4	4	4	4	n	y	y	Little daisy flowers, abundant blooms cover the mounded plants
3	3	3	3	y	y		Beautiful mix of colors on double blooms, lots of flowers on upright and floppy stems
3	3	2	3	y	y		Floppy stems, abundant blooms, outstanding mix of flower colors and shapes, some solids, some multi-colored rings
3	3	3	3	n	y		Thin floppy stems loaded with feathery blooms
3	3	3	3	y	y		Tall background plant with nice bicolor petals, spines make it difficult to cut
2	2	2	2	n	y	n	Unattractive tiny flowers, not showy, don't bother
2	2	2	2	sl	y		Shorter than most cleomes, first commercial semi-dwarf hybrid cleome, poor germination, late to bloom, not showy, All America Selections Flower Award 2003
1	1	3	1	n	y		Big bushy plant, no flowers, not at all showy, great if you want a green bush
4	4	4	4	y	n	y	Clouds of color, nice filler or in mass plantings, no maintenance needed, thin linear petals on wiry stems, difficult to handle as cut flower
3	3	3	3	sl	n		Big bushy plant covered with tiny flowers with fluted edges, wiry floppy stems are difficult to use as cut flowers, flowers tolerate only light frosts
1	1	3	1	n	y	n	No flowers without dark pretreatment, huge green bush, described as short day plant that begins blooming in September at lower latitudes
3	2	2	2	n	y		Interesting picotee-type petals, not as many blooms as other cosmos
1	1	4	1	n	y	n	No blooms without dark treatment of seedlings
1	1	2	1	n	n	n	Not a vigorous climber, few flowers just beginning to open at the end of the season, not showy
2	2	2	2	n	y		Flowers look like bachelor's buttons but longer stems, needs deadheading for best results, sparse blooms, best as filler
4	3	2	3	sl	n		Clouds of yellow, some disease late in season, excellent edging plant
3	4	4	4	n	y	n	Burgundy foliage, very late blooms in 2002 and 2003, poor showing in cold wet summer
1	1	3	1	n	n		No blooms this season, semi-cactus form
1	1	3	1	n	n		No blooms this season, cactus form
3	2	2	2	n	y		Flowers bunched together, many hidden beneath the dark green foliage, short stature, not the showiest dahlia
		3	1	n	n		No blooms this season
		3	3	n	n		No blooms this season
3	3	3	3	n	y		Plants loaded with bicolor flowers, many hidden by foliage, showy
3	3	3	3	n	y		Outstanding bright red blooms, great contrast of blooms with glossy foliage, showy, does not fit catalog description for this cultivar, gloriosa supposed to have mostly yellow flowers with red flecks

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Dahlia	Harlequin Mixed Colors	white, yellow, red, rose, purple	15	21	2½	3¾					* * * * *	n	n
Dahlia	Hillcrest Fiesta	yellow with orange highlights	24	28	4	7					* * * * *	n	n
Dahlia	Kelvin Floodlight	yellow		30	4	6					* * *	n	n
Dahlia	Lisa	white with lavender tips										n	n
Dahlia	Preference	peach		28	3	5					* * * * *	n	n
Dahlia	Summer Festival	yellow with peach highlights		24	3	5					* * * * *	n	n
Dahlia	Symphony Silk	red, cream, yellow with yellow centers	29½	39½	2½	4½			*	* * * * *	* * * * *	n	n
Dahlia	Trudy's Favorite	yellow with light orange centers	24	30	2½	4					* * * * *	n	n
Dahlia	Ursula Senzone	lavender		36	3	4½					* * * * *	n	n
Dahlia	Zingaro	yellow tipped with rose, pink	18	24	3½	4½					* * * * *	n	n
Dianthus	Amazon Neon Cherry	cherry red	6	13	½	3½					* * * * *	n	n
Dianthus	Amazon Neon Purple	purplish pink	7	12	1½	4					* * * * *	n	n
Dianthus	Amazon Rose Magic	pink, rose, white	9	14	1¾	3					* * * * *	y	n
Dianthus	Corona Cherry Magic	rose, pink/rose bicolor, rose with white markings	3	4½	1½	1¾	*	* * * * *	* * * * *	* * * * *	* * * * *	y	n
Dianthus	Dynasty Purple	rosy purple	3	7½	.75	1¼	*	* * * * *	* * * * *	* * * * *	* * * * *	n	n
Dianthus	Dynasty Red	dark velvety red	6½	12	½	1½		* * * * *	* * * * *	* * * * *	* * * * *	n	n
Dianthus	Dynasty White Blush	white with rose flecks	5	10	¾	1¼	*	* * * * *	* * * * *	* * * * *	* * * * *	n	n
Dianthus	First Love	white with rose markings, light pink, rose	5	11½	¾	1¼	*	* * * * *	* * * * *	* * * * *	* * * * *	y	n
Dianthus	Noverna Purple	purplish pink	5	11	1½	3		*	* * * * *	* * * * *	* * * * *	n	n
English Daisy	Lipstick	white with rosy red tips and yellow centers	2½	13	1½	2¼		* * *	* * * * *	* * * * *	* * * * *	y	y
Everlasting	Ebony 'N Ivory	white with black and yellow centers	7	22	½	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	n	n
Everlasting	Ebony Rouge	rose red with black centers	13	20	1	1¾	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	n	n
Gaillardia	Goblin	red tipped with yellow and yellow centers	10	14	1¼	3			*	* * * * *	* * * * *	n	n
Gaillardia	Sundance Bicolor	yellow and red	14	18½	1	2¼		*	* * * * *	* * * * *	* * * * *	n	n
Gazania	Daybreak Orange Cream	light orange, cream with orange or brown centers	6	15	1.5	3½		*	* * * * *	* * * * *	* * * * *	y	y
Gazania	Sunshine	gold, mahogany, yellow, rose with mahogany stripes	11	18	3	4½			*	* * * * *	* * * * *	y	y

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^y * indicates just starting to bloom, * indicates 50% bloom, and * indicates full bloom.

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	n	y		Many two-tone solid and bicolor flowers that seem to sit on top of mounds of foliage, two distinct petal types, showy dahlia from seed
3	4	3	3	n	y		Nice bicolor flowers, shorter than most grown in the garden
1	2	3	2	n	y		Very late to bloom, not much show, decorative form
1	1	3	1	n	n		No blooms this season
3	3	3	3	n	y		Loaded with medium-sized blooms, showy, semi-cactus form
3	3	3	3	n	y		Showy bicolor flowers, large blooms
2	2	3	2	n	y		Very late to bloom, not much show in 2002 or 2003, lots of foliage, few flowers
2	3	3	3	n	y		Small to medium flowers, better cultivars available, decorative form
3	3	3	3	n	y		Rounded globe-shaped flowers, very uniform on tall upright stems
4	3	3	3	n	y		Covered with blooms, showy, interesting bicolor flowers
2	3	3	3	sl	y		Huge balls of flowers on tall stems, needs closer spacing than shorter dianthus to fill in the beds, very attractive and colorful display
2	3	3	3	y	y		Large balls of flowers on tall stems, very colorful in mass plantings, doesn't branch out very far, needs closer spacing than shorter dianthus cultivars
2	3	3	3	y	y		Huge balls of flowers with pink, white and rose all in a single cluster, nice length for cutting
1	1	1	1	n	n		Very poor growth this season, did not fill in well, plants were tiny with few flowers, may be due to location in garden, All America Selections bedding plant award 2003
2	2	2	2	sl	y		Does not branch and fill in bed, needs closer spacing than other shorter dianthus, nice large flower clusters but overall effect is poor
2	2	2	2	y	y		Plants do not fill in well. Needs closer spacing for mass plantings.
2	2	2	2	n	y	y	Plants did not fill out well, needs very close spacing for mass plantings, ratty appearance when wet, needs deadheading, tolerates only light frost
2	2	2	2	sl	y		Medium-tall plant for cutting, variable flower height, beautiful mix of colors with blooms starting out white and maturing to pink, did not fill in well, better dianthus available, flowers tolerate only light frosts
2	3	3	3	y	y		Rounded clusters full of blooms, nice fragrance, needs close spacing to fill in bed well
4	4	4	4	n	n		Outstanding mounds of green foliage topped with abundant balls of flowers, beautiful contrast in flowers with red tipped petals
3	3	3	3	n	y	y	Full of flowers, excellent contrast between white flowers and black centers, long but thin and floppy stems for cutting, tolerates only light frost, Fleuroselect Quality Mark Winner
3	3	3	3	y	y	y	Abundant small blooms on thin spreading stems, very attractive, tends to become floppy in late season, tolerates only light frost
2	4	3	3	n	y	y	Very late to bloom, not as showy early in the season as other gaillardias
3	2	3	3	n	y		Mid sized mounds jammed with flowers, interesting flower color, blooms all season, All America Selections Bedding Plant Award 2003
3	2	3	3	n	n		Attractive color, not as popular as the multi-colored cultivars with stripes, closes up in cloudy weather, best planted in south-facing beds
2	3	3	3	n	n		Brilliant mix of colors with ornamental rosy stripes, closes up in cloudy weather, gorgeous in full sun

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y					Frost tolerance			
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers			
Gazania	Tiger Mix	cream, orange, yellow, rose, with mahogany stripes	7	13	1½	3¾	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n	
Geranium	Black Velvet Rose	pink	6	19	1	2¾		* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						y	y
Geranium	Maverick Violet	violet rose with dark rose markings	10	15	2¼	4¼		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						y	y
Geranium	Orange Appeal	orange	10	13½	1½	3½		* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Godetia	Amethyst Glow	purplish pink	4	21	1.5	2		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Godetia	Flamingo Mix	pink, lavender, white, rose	3	19	1	3			* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸					y	y
Godetia	Thoroughly Modern Millie	pink with rose centers, rose with pink centers, white with pink centers, peach	5	12	1½	2½			* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸					-	-
Godetia, Monterey	Lady in Blue	rosy lavender	7	20	1	1¾			* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸					n	n
Gypsophila	Gypsy Deep Rose	rose pink	1½	6½		¼		* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Hollyhock	Queeny Purple	dark rose	12	20	3	4		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Dazzler Apricot Improved	apricot pink	1	4½	1	1		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Dazzler Pink Deep Improved		2	5	1	1¼		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Dazzler Pink Improved	pink with rose centers	3	5½	1	1¼		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Dazzler Rose Swirl	rose with light pink centers	2	6	1	1¼		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Dazzler Star Mix		3	5	1	1½		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Deco Orange		2	6				🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Double Fanciful Coral	coral	1½	6½	¾	1		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Fanciful Orchid Rose	rose	1½	6	1	1½		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Showstopper Buttercream		3	5	1	¼		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Showstopper Cotton Candy	rose, cream, pink	1½	5	1	1½		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n
Impatiens, Garden	Showstopper Pink Improved		1½	5	1	1		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸						n	n

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Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
4	4	4	4	n	n		Attractive striped petals, closes up in cloudy weather, gorgeous in full sun, a favorite of Alaskans and visitors alike
3	4	4	4	n			Excellent contrast between pink flowers and leaves that are chocolate colored with green edges and veins, fills in beds well, one of the best geraniums in ground beds, some deadheading needed, All America Selections Flower Award Winner 2002, originally released as Black Magic Rose
3	3	3	3	n			Fills in bed nicely, needs deadheading especially after long periods of cold wet weather, bright electric color
3	3	3	3	n	y		Bright flower colors contrast nicely with even green foliage, needs deadheading, flowers and foliage tolerate light frost
2	2	2	2	y	y		Grew poorly in 2002, better show in 2003, tall lanky stems covered with blooms, nice display, tolerates only light frost
4	4	4	4	sl	y		Abundant blooms, outstanding clusters of flowers, mounds of color, needs some deadheading especially in wet weather
3	3	2	3	n	y		Late to bloom but worth the wait, some stems and leaves develop unattractive red coloration in cold weather, excellent stem length for cut flowers, a visitor favorite
4	4	4	4	n	n		Performed better than 2002, abundant blooms, floppy stems, needs deadheading after mid summer
4	4	3	4	sl	n	n	Mostly double flowers, abundant blooms, some Sclerotinia late in season, All America Selections Bedding Plant Award 2004
2	2	2	2	n	n	n	All America Selections Flower Award 2004, advertised to be a dwarf hollyhock up to 30 inches in height but barely made 12 inches, plants bloomed early then grew a bit, second flush of blooms was late, not one for the back of the bed
3	3	3	3	n	n	n	Interesting apricot pink color
3	3	3	3	n	n	n	Large flowers, attractive clear pink color
3	3	3	3	n	n	n	Nice flower size, fill in well for impatiens, uniform clear pink, not like others that become blotchy in cold weather
3	3	3	3	n	n	n	Attractive rosy bicolor shades
3	3	3	3	n	n	n	Interesting star pattern on petals, uniform show for all colors in mix
2	2	2	2	n	n	n	Not as bright as other impatiens, colors washed out
3	4	3	3	n	n	n	Very ornamental double petals, does not spread as well as other impatiens, but worth growing, especially in containers
3	3	3	3	n	n	n	Multi-petaled flowers are very attractive, flowers are slightly smaller than other cultivars
3	3	3	3	n	n	n	Attractive clear color, fills in well
2	2	2	2	n	n	n	Doesn't spread as well as other impatiens, not showy
3	3	3	3	n	n	n	Good-sized flowers with clear color, holds up well in cold weather

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y					Frost tolerance			
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers			
Impatiens, Garden	Super Elfin Blue Pearl		4	6			☼☼☼☼☼☼☼☼☼☼						n	n	
Impatiens, Garden	Super Elfin Red Imp.	red	3	7			☼☼☼☼☼☼☼☼☼☼							n	n
Impatiens, Garden	Super Elfin Ruby	red	4	6			☼☼☼☼☼☼☼☼☼☼							n	n
Impatiens, Garden	Swirl Coral Imp.	coral with lighter coral centers	3	5	1¼	1½	☼☼☼☼☼☼☼☼☼☼							n	n
Impatiens, Garden	Swirl Mix Monet		2	5			☼☼☼☼☼☼☼☼☼☼							n	n
Impatiens, Garden	Swirl Raspberry		3	6			☼☼☼☼☼☼☼☼☼☼							n	n
Jewels of Opar		hot pink	14	22		⅛		☼☼☼☼☼☼☼☼☼☼						n	n
Larkspur	Snow Cloud	white	12	20	¼	1		☼☼☼☼☼☼☼☼☼☼						n	n
Larkspur	White King	white	7	33½	1½ x 4	2 x 3½		☼☼☼☼☼☼☼☼☼☼						n	n
Lavatera	Easter Parade		9	24	1	3½		☼☼☼☼☼☼☼☼☼☼							
Lavatera	Ruby Regis	pink with dark red veins	7	18½	2	3½		☼☼☼☼☼☼☼☼☼☼						n	n
Lavatera	Silver Cup	rose	10	21	2	3½		☼☼☼☼☼☼☼☼☼☼							
Linaria	Fantasy Mix	lavender, purple, white, yellow, pink, rose	4	17	½ x ½	1½ x 2		☼☼☼☼☼☼☼☼☼☼						y	y
Linaria	Fantasy Yellow	yellow	4	8		¼		☼☼☼☼☼☼☼☼☼☼							
Love-in-a-Mist	Miss Jekyll Blue	blue	10	15	1	1½		☼☼☼☼☼☼☼☼☼☼						n	n
Lupine	Band of Nobles	pink/rose, purple/white bicolors	16	28	3 x 8	3 x 12		☼☼☼☼☼☼☼☼☼☼						y	y
Marigold, African	Flagstaff	dark orange	12	23	1½	3		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, African	Gold n' Vanilla	yellow, cream, orange mix	5½	13	1½	3½		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, African	Inca II Primrose	light yellow	5½	11½	2½	4½		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, African	Pesche's Gold	gold, yellow with yellow centers	10	21	¾	2¼		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Bonanza Bee	gold with mahogany markings	2	10	1¼	2½		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Bonanza Gold Imp.	gold	3	13	1¼	2¾		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Bonanza Orange	orange	6½	9	1¼	2½		☼☼☼☼☼☼☼☼☼☼						-	-
Marigold, French	Bonanza Yellow	yellow	2½	7½	1¼	2½		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	China Cat Mix	gold with yellow markings, yellow with gold markings, gold, mahogany	6	30	1¼	2½		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Durango Bolero	gold with red markings	3	8	1	2¾		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Durango Gold	gold	3	11	1¼	3		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Durango Mix	yellow, orange, gold, orange with red markings, yellow with red markings	3½	8	1¼	3		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Durango Red	mostly red with orange markings	4	9	1¼	3¾		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Durango Yellow Improved	yellow	4	11	1¾	3		☼☼☼☼☼☼☼☼☼☼						n	n
Marigold, French	Honeycomb	orange with red markings	3	10	1	2¼		☼☼☼☼☼☼☼☼☼☼						n	n

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Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	n	n	n	Interesting color, large flowers
3	3	3	3	n	n	n	Lots of medium-sized blooms, very good clear red color
3	3	3	3	n	n	n	Good flower size and color
3	3	3	3	n	n	n	Attractive picotee pattern
2	2	3	2	n	n	n	Mixed colors, not as attractive as solid colors, medium-sized flowers
3	3	3	3	n	n	n	Interesting color mix with swirl patterns on all petals
2	2	2	2	n	y	y	Tiny flower and sparse stems, nearly invisible in the garden, needs close spacing, poor show
1	1	1	1	n	y		Floppy stems, weak, not much of a show, try direct seeding
1	1	1	1	sl	y		Floppy stems, died out by late August, try direct seed rather than transplants
0	0	0	0				Poor seed germination, plants never became established, died early in season probably from Sclerotinia cottony rot
3	3	3	3	n	y	n	Bloomed well all season, only lavatera in trials to grow well, showy all season, tolerates only light frost
0	0	0	0	n			Plants died early in season probably of Sclerotinia cottony rot
3	3	3	3	n	y		Abundant carpet of color, very nice mix of colors, looks great after cold wet weather
2	1	1	1				Clumps of bright yellow color early in season, declined early, needs significant deadheading by midseason to keep flower color, high maintenance
2	3	3	3	n	n		Blooms early then dwindles, interesting seed heads but not very showy, feathery foliage, needs deadheading
3	3	3	3	n	y		Excellent tall flower stalks covered with blooms late in the season
4	3	3	3	y	y	y	Very attractive large flowers with fluted petals
3	3	3	3	y	y	y	Interesting mix of colors, needs deadheading late in season to remove rotten flowers
4	4	4	4	y	n	y	Attractive color, huge flowers, needs deadheading for best show, watersoaked appearance in cold wet weather
3	3	3	3	y	y	y	Very interesting flowers with frilly edges, abundant blooms, nice big full plant
3	3	3	3	sl	n	y	Compact plant covered with blooms, uniform size and height, needs deadheading after cold wet weather, attractive display
3	3	3	3	sl	n	y	Beautiful large flowers with brilliant color especially in mass planting, variable plant height, abundant blooms
3	3	3	3	y	n	y	Brilliant carpet of electric color, needs deadheading, great show
3	3	3	3	n	n	y	Very bright mounds of electric color, uneven height, needs deadheading especially after cold wet weather
4	4	3	4	y	y	y	Attractive big mounds covered with blooms, some double, others single, needs no maintenance, great filler, flowers tolerate only light frost
3	3	3	3	y	n	y	Interesting markings on petals, needs deadheading in mid season for full color
3	2	2	2	y	n	y	Nice large flower heads, brilliant colors in early and mid season, does not hold up well in cold wet weather, needs deadheading
3	2	3	3	y	n	y	Unattractive mix of different-sized plants, flowers and foliage tolerate only light frosts
3	2	2	2	y	n	y	Attractive rich dark red color, uniform height, needs deadheading for best color
3	3	3	3	y	n	y	Very nice color display, bright vibrant, even color for mass plantings, large blooms
4	4	3	4	y	n	y	Elegant blooms, interesting patterns on flower petals, one of the best French marigolds

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y					Frost tolerance			
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers			
Marigold, French	La Bamba	yellow with light orange stripes	11	23	1	2¼	* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Marigold, French	Moonlight	creamy yellow with yellow centers	9	19	1¾	3			* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼					n	n
Marigold, French	Mr. Majestic	yellow with mahogany strips, mahogany with yellow stripes, yellow, mahogany	6	17	1¼	1¾	* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Marigold, Signet	Luna Yellow	yellow	2	16	¼	1			* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼					n	n
Melampodium	Lemon Delight	light yellow with dark yellow centers	2½	7½	¼	½	☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Mimulus	Mystic Mix	yellow with red spots, red, orange	4	10	1¼	1¾	☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Nasturtium	Alaska Salmon Orange	orange	3	15	1	2¼			* * ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nasturtium	Caribbean Cocktail	rosy pink	4½	18	1¼	2½			* * ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nasturtium	Fiery Festival	brilliant orange red	4	20	1½	2½			* * * ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nasturtium	Golden Gleam	gold	6	19	1½	2½			* * ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nasturtium	Milkmaid	creamy yellow	4	15	1¼	2¼			* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nemesia	Blue and White	blue and white bicolor	6	13	¼	¾	* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Nemophila	Pale Face	white with dark spots, some with dark purple centers	2	13	⅛	¼			* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nicotiana	Fragrant Cloud	white	26	41	1½	3			* * ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nicotiana (alata)	Lime Green	greenish yellow	17½	28	1¼	1¾			* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nicotiana (alata)	Sensation White	creamy white	11	35	¾	1			* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				n	n	
Nicotiana	Langsdorfii	greenish yellow	11	35	1¼	2			☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼				y	-	
Nicotiana	Sylvestris	white	38	48	¾	1					☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼		n	n	
Osteospermum	Glistening White	white with deep blue centers	6	13	1½	3	☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Palafoxia	Atlas Windjammer	lavender pink	10	20	½	1	☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Pansy	Mix	orange, purple, lavender, white with lavender face	4	13	1½	2½	☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Pansy	Baby Bingo Denim	reddish purple	4	18	1	1½	☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						y	y	
Pansy	Bingo Clear White	white with yellow spot in center	3	12	1	3	* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						y	y	
Pansy	Bronze Tone	mahogany edged in yellow with mahogany face, some burgundy	7	17	1	2¼	* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						n	n	
Pansy	Brunig	mahogany face edged in bright yellow	5	10	1¼	2	* ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼ ☼						y	y	

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^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y * indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
4	4	4	4	n	y	y	Big flouncy plants covered with blooms, excellent flower display even after wet cold weather, fills in bed very well and crowds out neighbors, interesting striped petals	
3	3	3	3	n	y	y	Interesting large flowers with fluted edges on petals, large yellow centers, a very different kind of marigold, needs deadheading especially after cold wet weather, excellent flower color	
3	3	3	3	sl	n	y	Excellent bushy plant covered with small blooms, interesting pattern ranging from pure colors to stripes and splotches of yellow and mahogany, holds up better than most marigolds in cold wet weather	
4	4	4	4	y	n	y	Great mounds of bright color, reliable attractive all season, needs some deadheading for full season color	
4	3	3	3	n	n		Neat mounds covered with blooms, needs close spacing to have mass effect	
4	4	4	4	n	n	n	Poor performance in 2002, excellent growth this year, masses of multi-colored flowers with interesting spotted throats	
2	2	1	2	n	y		White speckled foliage typical of Alaska cultivar, not really salmon color, mostly orange, many plants appear diseased with poor weak growth	
4	4	4	4	n	y	n	Miniature leaves, flowers held just above the foliage, showy, catalog shows mix of flower colors pinks, rose, creams and raspberry shades, variation not evident in mix	
3	3	3	3	n	y	n	Bright showy colors, plenty of blooms above the foliage	
3	3	3	3	y	y	n	Trailing type, giant mounds of foliage and flowers, many flowers hidden beneath the foliage but still a great display, holds up well in cold wet weather	
4	4	4	4	n	y		Beautiful color, striking contrast with mounds of foliage	
4	4	4	4	n	n	n	Poor in 2002, excellent growth this year, abundant blooms, very ornamental bicolor flowers, nice small mounds of color, great in mass plantings	
4	4	4	4	n	n	n	Plants jam-packed with flowers, excellent color for most of the season	
3	3	3	3	sl	y		Tall stems covered with trumpet-line blooms, great for backgrounds and borders	
3	3	3	3	sl	y		Excellent color, abundant trumpet-shaped blooms, tolerates only light frost	
3	3	3	3	sl	y		Tall plants with clusters of white flowers	
3	3	2	3	y	y		Excellent color, abundant tubular blooms, uniform height, color combines well with reds or purples	
3	3	3	3	sl	y		Attracts insects on foliage, nice growth but 'Only the Lonely' cultivar is better, excellent height for back ground plantings, tolerates only light frost	
3	3	3	3	n	y		Beautiful shiny white petals with blue centers, very ornamental, ragged late in the season, needs deadheading especially late in the season	
3	2	2	2	sl	y		Bushy plants with tufts of flowers, needs closer spacing and deadheading for best results	
3	3	3	3	y	y	y	Excellent combination of colors, some flowers with ruffled edges, most with dark faces, tolerates only light frost	
4	4	3	4	sl	y	y	More red than "denim" blue, billowy plants covered with blooms, excellent show all season	
3	3	3	3	y	y	y	Very nice large flowers, clear white petals, excellent vibrant color all season	
3	3	3	3	y	y	y	Very interesting color combination, works well with rudbeckias and other gold/brown flowers	
3	3	3	3	sl	y		Interesting sharply contrasting colors on petals, yellow edges are vibrant against mahogany centers	

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y												Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers								
Pansy	Copperfield	mostly dark rose with dark face, some cream/red, yellow/red	6	14	1¼	2½	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									y	y			
Pansy	Coronation Gold	gold	4	14	1	3¼	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									n	n			
Pansy	Fama Orange	orange	5	11½	1¾	2½	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									n	n			
Pansy	Ice Cream Mix	yellow, rose, cream	4	15	1½	2¾	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									y	y			
Pansy	Light Strawberry Sundae	burgundy, rose with yellow centers	3	10	1	2	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									n	n			
Pansy	Luna	yellow, clear face	2	10	1	2¼	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									y	y			
Pansy	Majestic Patricia	creamy yellow and lavender with purple face	7	17	1	2	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									y	y			
Pansy	Pandora's Box	rose, lavender and yellow with dark centers	2	15	1	1¾	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									y	y			
Pansy	Sorrento Sunset	rose, cream, dark rose with yellow centers	5	15½	1¾	3¼	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸									y	y			
Pansy, Ice	Northpole	white with lavender face	4	17	1¼	2½	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				
Petunia	Aladdin Nautical Mix	white, pink, purple, light blue	4	11	2	4	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				
Petunia	Blue Wave	deep velvety purple	2	14	1¼	2		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸							y	y				
Petunia	Carpet Rose Star	rose with white star pattern	3½	10½	1½	3	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				
Petunia	Double Cascade Mix	pink, rose, white	6	13	2½	4¼		* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸							y	y				
Petunia	Double Cascade Orchid Mist	very pale orchid pink	7	16	2½	4		* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸							y	n				
Petunia	Double Cascade Pink Soft	pink with dark pink veins	5	9½	3	4	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				
Petunia	Double Pirouette Red	red with white edges	6	14	2	4	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				
Petunia	Dreams Mix Patriot	white, purple, red	4½	14	2¼	3¼		🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸							y	n				
Petunia	Easy Wave Pink	pink with white throat	4	11	2	3	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								n	n				
Petunia	Easy Wave Salmon	salmon pink	2	6	1½	2½	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								n	n				
Petunia	Easy Wave White	white	2	6	1½	2½	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								n	n				
Petunia	Frillytunia Rose	deep rose pink	6	15	1¼	2½		* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸							y	n				
Petunia	Limbo Violet	violet	3	10	1¼	3	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								n	n				
Petunia	Madness Clear Mix	purple, rose, pink, white, magenta, coral	6½	14	1½	2¾	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				
Petunia	Madness Magenta	magenta	3½	13	1¾	2¾	* 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸								y	n				

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^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y * indicates just starting to bloom, 🌸 indicates 50% bloom, and 🌼 indicates full bloom.

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	2	2	n	y	y	Interesting color, bright, vivid colors, abundant blooms cover mounds of foliage
3	3	3	3	y	y	y	Huge, abundant blooms, mostly solid colors, very bright continuous color all season, tolerates only light frost
3	3	3	3	y	y		Attractive clear orange blooms, flowers and foliage tolerate only light frost, good color and size all season
3	3	3	3	sl	y	y	Abundant, medium sized flowers, nice plant but nothing to write home about
3	3	2	3	y	n	y	Velvety flowers with bright yellow center spots, needs deadheading especially after cold wet weather, flowers are ragged and splotchy in prolonged rain
3	3	3	3	n	y	y	Reliable color all season, very nice solid color on large flowers, no maintenance needed
3	3	3	3	sl	y	y	Large flowers, attractive bicolor, not the most showy pansy, fewer flowers than other cultivars
3	3	3	3	n	y	y	Great mounds of color nearly all season, unusual and attractive color combination
4	4	4	4	n	y	y	Attractive flower color, flowers look ragged following rain, not the best in cold wet weather
3	3	3	3	sl	y	y	Abundant large blooms, nice combination of colors, tolerates only light frost
3	4	3	3	sl	n		Excellent color mix, forms nice mounds covered with blooms all season
4	4	3	4	sl	n		Outstanding carpet of velvety flowers, spreads well, All America Selections Flower Award 2003, try in containers
3	3	3	3	n	n	n	Plant needs deadheading late in season, some Sclerotinia cottony rot in August, interesting star-patterned petals
3	3	3	3	sl	n	n	Splotchy petals after rain, susceptible to Sclerotinia cottony rot, large double flowers most spectacular early in season, best double this year, needs deadheading late in season
3	3	3	3	sl	n		Very large flowers, attractive blooms, needs deadheading, susceptible to Sclerotinia cottony rot, looks ragged after prolonged rain, flowers tolerate only light frost
2	3	3	3	n	n		Nice bushy plants with huge flowers, best display early to mid season, holds up better than most petunias in cold wet weather, susceptible to Sclerotinia cottony rot
2	3	3	3	y	n	n	Interesting white picotee edging on ruffled petals, very showy, susceptible to Sclerotinia cottony rot in late summer, All America Selections winner
2	3	3	3	y	n	n	Attractive mix of solid colors and abundant blooms, needs deadheading to maintain all season color, susceptible to Sclerotinia rot late in season, tolerates only light frost
4	4	4	4	y	n	n	Excellent carpet loaded with blooms, needs some deadheading after rain
3	3	3	3	n	n	n	Outstanding color, plant spreads well to form solid mats of color
3	3	3	3	n	n	n	Clear white, very dramatic carpet through most of the summer, flowers hold up well through summer with little damage from cold wet weather
3	3	3	3	y	n	n	Very ornamental frilly-edged blooms, strong vibrant rose color, needs some deadheading especially after cold wet weather, flowers tolerate only light frost
3	3	3	3	sl	n	n	Attractive early in season, great, uniform color, poor flowers late in season, ratty in cold wet weather, needs deadheading, All America Selection Bedding Plant Award 2003, not impressed
3	3	2	3	sl	n		Upright and spreading stems, fills in well, nice mix of colors, pock marked foliage late in season, needs deadheading, tolerates only light frost
3		3	3	y	n	n	Excellent brilliant blooms early in season, susceptible to Sclerotinia cottony rot if not treated, tolerates only light frost

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y					Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Petunia	Madness Waterfall Mix	magenta, pink, purple, white	9	14	1¾	3	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	n	
Petunia	Old Glory	white, purple, red	3½	14	1½	3	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Petunia	Stars & Stripes	red w/white stripe, purple, white, purple w/white stripe	5	16	2	4	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	n	
Petunia	Tidal Wave Purple	purplish pink	8	27	1¼	2¼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	y	
Petunia	Tidal Wave Silver	silvery lavender with purple veins and throat	4	23	1½	3	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Petunia	Ultra Salmon Morn	salmon pink with cream throat	5	9	2	4	*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	n	
Petunia	Wave Lavender	purplish pink	2	6	2	2½	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Petunia	Yellow Magic	yellow	2	20	1½	2½	*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	n	
Phlox, Garden	21st Century Mix Patriot	red, white, purple, lavender	3	11½	1	1½	*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Portulaca	Margarita Scarlet	scarlet	2	5½	½	1¾	*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Autumn Colors	two-toned mahogany with mahogany centers, some yellow-tipped, yellow streaked petals	14	24	1½	6		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Cherokee Sunset	gold, gold streaked with mahogany, mahogany with mahogany centers	17	20	2	4½		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	y	
Rudbeckia	Chim Chiminee™	mahogany, gold with mahogany centers	18	30	2½	5½		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Double Gold	gold with brown centers	13½	34	4	6		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Prairie Sun	gold fading to yellow at tips, green centers	18	31	2¾	6¼		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Sonora	gold with brown center ring, brown centers	18	25	2½	5½		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Spotlight	gold with brown centers, brown spot on petals	3½	9½	1	3		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Rudbeckia	Sputnik (Kelvedon Star)	gold with mahogany & brown centers	15	35½	1¾	5		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Salvia, Scarlet	Blue Ribbon	lavender	5	14	1 x 1¼	2½ x 4		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Salvia, Scarlet	Red Arrows	scarlet	7	15	1½ x 2	1½ x 6		☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	
Salvia (viridis)	Marble Arch Mix	pink, lavender, white bracts	11	27	1½ x 2	2 x 2½		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	y	y	
Scabiosa	Ace of Spades	burgundy with light spots	10	27	1¼	2¼		*☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	☼☼☼☼☼☼☼☼☼☼	n	n	

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^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y * indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
4	3	3	3	sl	n		Excellent solid color mix, fills in well, flowers tolerate only light frost	
3	3	3	3	y	n	n	Plants fill in well, nice mix of colors, purple flowers most fragrant, pock marked petals in cold wet weather, needs deadheading	
3	2	2	3	y	n		Slightly ruffled flowers with nice of colors, some striped flowers, fills in well, susceptible to Sclerotinia cottony rot late in season if not treated, tolerates only light frost	
4	4	4	4	y			Huge mounds of color, no maintenance, differs only in color from other Tidal Wave cultivars, a visitor favorite	
4	4	4	4	sl	n	n	Outstanding mounds of color, fills in the entire bed and beyond, All America Selections Flower Award 2002, All America Selections Flower Award 2003	
3	3	3	3	sl	n		Needs deadheading, flowers are ragged and splotchy when old	
3	3	3	3	sl	n		Spreads well, forms short carpet of color, best blooms in mid to late summer, some Sclerotinia late in season, tolerates light but not heavy frosts, All America Selections Flower Award 2002	
3	3	3	3	sl	n		Excellent two-toned yellow flowers with ornamental ruffled petals, excellent contrast with green foliage, great upright flowers, nice show	
2	3	2	2	n	n		Poor quality in 2002, better in 2003, pale foliage in cool weather, tolerates only light frost	
2	2	2	2	n	n	n	Does not spread well even in raised beds, flowers close up in cool cloudy weather, rich flower color, All America Selections winner	
3	3	3	3	n	y	y	Interesting mix of flower colors with mahogany and yellow, nice addition to rudbeckia choices, flowers and foliage tolerate only light frost	
3	3	3	3	n	y	y	Interesting rich colors, mostly mahogany, some fully double and semi-double flowers, most singles, All America Selections Flower Award 2002	
3	2	3	3	n	y	y	Unusual linear petals on some flowers, nice mix of golds and mahogany, excellent for cutting, not the most showy rudbeckia, flowers and foliage tolerate only light frost	
3	3	3	3	n	y	y	Unusual double flowers, interesting contrast to usual rudbeckias, very attractive, about one third fully double, remainders are singles and semi doubles, flowers and foliage tolerate only light frosts	
3	3	3	3	n	y	y	Interesting two-toned petals and green centers, abundant blooms, flowers and foliage tolerate only light frost, All America Selections Flower Award 2003	
3	3	3	3	n	y	y	Interesting mahogany patterns on petals similar to 'Sputnik', reliable mid to late season blooms, flowers tolerate only light frosts	
4	3	3	3	n	n	y	Needs close spacing to fill in bed, catalogs show interesting brown spot on each petal but did not occur on all plants, uneven quality, dwarf rudbeckia	
3	3	3	3	n	y	y	Very ornamental mahogany markings on petals, makes it stand out among other rudbeckias, full of blooms	
3	3	3	3	n	n		Attractive color, catalog shows white stripes on flowers, these were not distinct, flowers turn brown when old, needs deadheading	
3	3	3	3	n			Tall bright red spikes of flowers, blooms well all season, needs some deadheading for best display, showy	
4	4	4	4	n	y	y	Shorter than other salvias of this type, white-bracted plants perform poorly, give mix a ragged appearance	
3	3	3	3	sl	y		Rich velvety appearance, lavender "pins" give pin cushion look, elegant, tolerates only light frosts	

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y					Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Scarlet Runner Bean		scarlet	72	112	½	1				*	* * * * *	n	n
Shasta Daisy	Alaska	white with yellow centers	12	33	2	4				*	* * * * *	n	n
Shasta Daisy	Crazy Daisy	white with yellow centers	20	30	3	5				*	* * * * *	n	n
Shasta Daisy	Silver Princess	white with yellow centers	10	26	1½	3¾	*	*	*	*	* * * * *	n	n
Shoo Fly Plant	Splash of Cream	lavender blue	23	43	½	1¼				*	* * * * *	n	n
Snapdragon	Double Madame Butterfly Mixed	white, pink, rose, red, peach	5	33	2½ x 5	4 x 12				*	* * * * *	n	n
Snapdragon	Dwarf Kim Mix	yellow, white, red, pink, orange, rose	4	12	1½ x 2	2 x 3½	* * *	* * *	* * *	* * *	* * * * *	n	n
Snapdragon	Floral Showers Purple	deep purplish rose	3	8.75	1 x 1¼	2½ x 4	* * *	* * *	* * *	* * *	* * * * *	n	n
Snapdragon	Frosted Sunset	pink with yellow/orange throat	7	14	2 x 1½	3 x 6	* * *	* * *	* * *	* * *	* * * * *	y	y
Snapdragon	Liberty	red, pink, orange, pink/orange bicolors, pink, white, yellow	8	24	2 x 3	2½ x 8	*	* * *	* * *	* * *	* * * * *	y	y
Snapdragon	Lilac Time	lavender pink	8	21	2 x 3	3 x 10	*	* * *	* * *	* * *	* * * * *	y	y
Snapdragon	Madame Butterfly Mix	pink, yellow, rose, red, white	12	30	2 x 3	3 x 8		*	* * *	* * *	* * * * *	n	n
Snapdragon	Rocket Yellow	two-toned yellow	16	34½	1¾ x 5½	3 x 11¼				*	* * * * *	y	y
Snapdragon	Solstice Hybrid Mix	orange, pink, white, yellow, rose, yellow/orange bicolor	6½	11½	2 x 3	2½ x 7	* * *	* * *	* * *	* * *	* * * * *	y	y
Snapdragon	Sonnet White Improved	white	7	17	2 x 2½	2½ x 9	*	* * *	* * *	* * *	* * * * *	y	y
Spilanthes, Eyeball Plant	Peek-A-Boo	yellow with red centers	3½	7	⅛	¼	*	* * *	* * *	* * *	* * * * *	n	n
Statice	Gold Coast	yellow	11	30		¼		*	* * *	* * *	* * * * *	n	n
Statice	Pastel Shades Mix	pink, lavender, white, rose	9	33	⅛	1	*	* * *	* * *	* * *	* * * * *	y	y
Stock	Giant Imperial Mix	rose, lavender, white, pink, purple	16	25	3 x 3	3 x 5½				*	* * * * *	y	y
Strawflower	Perfect Jewel Mix	rose, pink, light pink with yellow centers	26	40	1¼	2½				*	* * * * *	n	y
Sunflower	Bohemian Rhapsody	gold with overtone of mahogany, chocolate centers	34	64	3	7½				*	* * * * *	n	n
Sunflower	Chianti	mahogany with brown centers	25	38	2½	6				*	* * * * *	n	n
Sunflower	Dorado	gold with chocolate brown centers	44	52	¾	6½				*	* * * * *	n	n

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^y * indicates just starting to bloom, * indicates 50% bloom, and * indicates full bloom.

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
3	3	3	3	n	y	n	Old standby used to compare other lesser known vines, great show of flowers and long bean pods	
4	4	4	4	n	y		Still the best shasta daisy, robust plants covered with blooms in mid season, excellent for cutting	
3	3	3	3	n	y		Unusual mix of doubles and crinkled petals, lots of variability in flower form, floppy stems, but great show	
3	3	3	3	n	y		Odd mixture of stem heights, ragged appearance, outstanding individual flowers and lots of them, tolerates only light frost	
3	3	3	3	n	y	n	Advertised for it's variegated speckled foliage, few leaves actually had the yellow specks, otherwise very similar to the all-green species, will self sow if plants are tilled into the garden at the end of the season	
3	4	3	3	y	y		Excellent straight stems with ample length for cutting, very nice mix of colors, azalea (butterfly-type) petals are very showy, completely double	
3	3	3	3	n	n		Multi-colored carpet of color, needs deadheading for continuous color, tolerates only light frost	
3	3	3	3	n	n	n	Excellent carpet of color nearly all season, needs deadheading for best display, more red than purple, tolerates only light frost, catalog indicated this cultivar was bred especially to flower under short day conditions, did fine here	
3	3	3	3	n	y		Interesting two-toned flower color, medium sized snap, abundant blooms	
3	3	3	3	n	y		Strong straight stems, good for cutting, nice mix of colors	
3	3	3	3	sl	y		Attractive pastel color, needs deadheading, finished by late August	
3	3	3	3	n	y		Ruffled butterfly petals, outstanding mix of colors, nice straight stems long enough for cutting, very showy, tolerates only light frost	
4	4	4	4	n	y		Tall straight stems, excellent for cutting, two-toned appearance very attractive	
3	3	3	3	n	y	n	Attractive mix of colors, needs deadheading for best color	
3	3	3	3	n	y		Needs deadheading to extend bloom time, very nice uniform height and appearance	
3	3	3	3	n	n		Very unusual flower, looks like eyeballs on a stick, plant has red stems and reddish foliage, would be outstanding in a children's garden, fills in well, great for front of beds, an unusual conversation piece	
3	3	3	3	n	y	y	Interesting mix of gold and yellow shades, lots of blooms, great for cutting or drying, flowers and foliage tolerate only light frost	
3	3	3	3	n	y	y	Very nice mix of pastel shades, good strong stems for cutting, vibrant colors	
3	3	3	3	y	y		Some double, mostly single flowers, very nice mix of colors and great contrast with silvery foliage, flower stalks are leggy late in season	
3	3	3	3	n	y	y	Nice tall stems or cutting, great mix of pink shades, great for cutting and dried arrangements	
3	3	3	3	n	y	n	Shorter than expected, abundant medium sized flower heads, attractive bicolor	
3	3	3	3	n	y		Medium sized heads, attractive dark color contrasts well with other sunflowers, other cultivars have longer bloom time	
3	3	3	3	n	y	n	Medium sized stems with abundant flowers, pollenless, single-stemmed type, intense contrast between petals and center disk	

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y				Frost tolerance				
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers			
Sunflower	Double Dandy	red with burgundy centers	15	23	1½	4¾		* 🌻	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n		
Sunflower	Dwarf Yellow Spray	yellow	13	26	2½	5			* 🌻	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n	
Sunflower	Earthwalker	mostly mahogany, gold with brown centers	28	55	3½	8				🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n	
Sunflower	Ikarus	yellow with chocolate centers	20	36	1¾	6¾			* 🌻	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n	
Sunflower	Infrared Hybrid	mostly dark red with chocolate centers	32	50	5½	6½				🌻 🌻	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n
Sunflower	Lemon Flair	yellow with brown centers	26	37	3	5				🌻	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n
Sunflower	Starburst Aura	gold with green centers	43	51	5	8				*	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n
Sunflower	Summer Sunset Mix	rose, yellow, mahogany with brown centers	28	52	4	6½					🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n
Sunflower	Sundown	gold tips, mahogany centers with chocolate centers	40	57	4	5½					🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n
Sunflower	The Bee's Knees	gold with brown centers	36	47	3¾	10				*	🌻 🌻 🌻 🌻 🌻 🌻 🌻 🌻			n	n
Sweet Alyssum	Snow Crystals	white		⅛	½	1½	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Sweet Mace		orange	7	11½	½	1½	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	n	n
Three-birds-flying		purplish pink/yellow bicolor	7½	18	1½ x 4½	2½ x 5½				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Tidy-tips		yellow with white tips	7	23½	1	2				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Verbena	Bonariensis	lavender	15	33	½	3				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	n	n
Verbena, Garden	Crystal Ball Mix	pink, lavender, rose, white, red, purple, peach	6½	13	¾	1½				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Verbena, Garden	Quartz Magenta	magenta	6½	12	1½	2½				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	n	n
Verbena, Garden	Quartz Mix Waterfall	purple, lavender, cream, rosy purple	4½	11	1	2¼				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Verbena, Garden	Quartz Rose	rose, white centers	7	11½	½	1				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	n
Verbena, Garden	Quartz Scarlet	scarlet	4	11	1	2½				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Verbena, Garden	Quartz White	white	3	12	1½	2¼				*	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Verbena, Moss	Lavender Mist	lavender, white	2	22	1½	2				🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	n
Verbena, Rose	Perfecta	hot pink, purplish pink	2½	18	¾	1¾				🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Viola	Jewel Yellow	bright yellow	2	14	½	1¼				🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Viola	Lemon Swirl	lavender with creamy yellow centers & purple whiskers	4	14	1	1½				🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	n
Viola	Penny Porcelain	purple and lavender with cream centers	5	15½	1	1¼				🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y
Viola	Penny Violet	lavender with violet face	4½	17	1	2¼				🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	🌻 🌻 🌻	y	y

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Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	n	y		Unusual double petals, quite showy early in season but finished by mid season, first dwarf red sunflower
3	3	3	3	n	y		Short plant completed blooms early, matured seeds, attracted squirrels, recommended for use as a short hedge, in children's gardens and in containers
3	3	3	3	n	y		Straight tall stems with good mix of colors
3	3	3	3	n	y	y	Excellent long-blooming, medium-sized sunflower perfect for cutting, many flowers per stem, great background plant, brown centers bigger than surrounding yellow petals
4	3	3	3	sl	y		Plenty of small flowers, finished by mid August, nice rich red colors
3	3	3	3	n	y		Interesting feathery pollenless flowers, flowering declines by mid August, small heads, good for cutting
3	3	3	3	n	y		Short plant with multiple branches of small feathery pollenless flowers, needs some deadheading after cold wet weather
2	2	2	2	n	y	n	Single semi-double and double flowers, pollenless, ragged appearance late in season, showed some damage from Sclerotinia cottony rot, there are better cultivars
2	3	3	3	n	y		Rich colors with bands of mahogany and gold, medium sized multiple heads
3	3	3	3	n	y		Some double blooms, extremely variable flower size, pollen free, strong stems for cutting
4	4	4	4	y	n	n	Nice carpet of white, uniform growth excellent for edging, very fragrant
3	3	3	3	n	y		Attractive orange color, medium-sized plants topped with clusters of tiny flowers, good filler or accent for edging, tolerates only light frost
3	3	3	3	n	y	n	Interesting butter 'n eggs- type flower with long spurs on tall stalks, bicolor flowers, droopy late in the season
4	4	3	4	n	y	y	Billowy mounds of color, floppy stems but covered with blooms
3	4	3	3	n	y	y	Tall open spreading stems with small clusters of lavender flowers, good filler or background plant, sparse throughout the season, plants spread well and fill in bed, needs deadheading in late summer
3	3	3	3	y	y		Similar to Quartz Mix, very nice color mix, good cover of color throughout the season, plants spread well and fill in bed, needs deadheading in late summer
3	3	3	3	y	y		Spreading branches covered with blooms, very attractive display all season, needs deadheading for best display
3	3	3	3	y	y		Very nice display, covered with flowers, needs deadheading to maintain flowers
3	4	4	4	n	y		Needs deadheading, showy masses of flowers, abundant blooms that contrast well with dark green foliage
4	3	3	3	sl	y		Outstanding, eyepopping flowers cover the foliage, one of the best shows of color for verbenas, needs deadheading, All America Selections winner
3	3	3	3	y	y		Beautiful pure white flowers, nice contrast with dark green foliage, needs deadheading
3	3	3	3	sl	y		Small clusters of billowy flowers, plants covered with blooms, nice display all season, tolerates only light frost
3	3	3	3	n	y		Fills in well and blooms well all season, mounds are covered with color all season, no maintenance needed
4	3	3	3	sl	y	y	Eyepopping mounds of brilliant yellow, very ornamental, no maintenance necessary
4	4	4	4	sl	y	y	Billows of color all season, no maintenance, fills in beds well
4	3	3	3	y	y	y	Outstanding mounds of flowers, excellent after periods of cold wet weather, one of the best violas
4	4	3	4	n	y	y	Excellent two-toned blooms, abundant blooms, no maintenance

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Table 3. Results of tested cultivars for 2003, cont.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y												Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers								
Viola	Sorbet Coconut Swirl	lavender with cream centers, purple whiskers	4	12	1	1½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼										y	n		
Viola	Sorbet Orange Delight	light orange, mahogany whiskers	4½	14	¾	1½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											y	y	
Viola	Sorbet Orange Duet	light orange, purple bicolor	4	17½	1	1½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											y	y	
Zinnia (angustifolia)	Tropic Snow	white with yellow centers	4	8	2	2½												n	n	
Zinnia, Garden	Bright Jewels Mixture	magenta, white, pink, rose	11	24	3	5	*☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia, Garden	Dreamland Coral	orange, some red	7	16	2	3½	*☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia, Garden	Envy	greenish yellow	4	7	2	2½												n	n	
Zinnia, Garden	Indian Summer Mix	scarlet, yellow, rose, cream, red	7	20	2¼	3½	*☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia, Garden	Pink Ruffles	rose & pink with yellow centers	10	22	1½	3½	*☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia, Garden	Purple Dahlia	magenta	9	31½	2½	3½	*☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia, Garden	Zinnita Mix	orange, rose, white, red, yellow	2½	7	¼	1¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia (haageana)	Profusion White	white with yellow centers	3	15	1	2¼												-	-	
Zinnia, Mexican	Chippendale Daisy	orange and mahogany mixed patterns	4	15½	1	2½	*☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Zinnia (tenuifolia)	Red Spider	scarlet	4	31	1	1¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	

^w if the plant is uniform in height, the height is recorded under max only.

^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y ☼ indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
4	4	4	4	sl	y	y	Artistic flower patterns, appears hand painted, tolerates only light frost	
4	4	4	4	sl	y	y	Huge mounds of orange flowers, excellent show all season, no maintenance	
4	4	4	4	y	y	y	Attractive, unusual bicolor flowers, older flowers fade slightly, huge mounds of flowers, no maintenance, Fleuroselect Gold Medal Winner 2003	
1	1	1	1	n	y		Tiny mounding plant, other angustifolia types are much better, needs closer spacing for best results, looks particularly ratty in late August	
2	2	2	2	n	y	y	Some diseased foliage, whites are ratty in cold weather, uneven height, odd flower shapes, nothing special	
3	3	3	3	n	y	y	Outstanding flower color, plants are mounds of bright orange, interesting two-toned effect with dark orange older petals and tawny center petals, variable height, stems a little short on some plants for cutting, Dahlia-flowered class	
2	3	2	2	n	y	y	Unusual greenish color, excellent contrast with dark green foliage, straight upright stems, works well with purple flowers	
2	2	2	2	n	y	y	Very nice mix of colors, large flowers, needs closer spacing in mass plantings, does not fill in well	
3	3	3	3	n	y	y	Small compact flowers, needs closer spacing for full blooms in mass plantings, one orange flowered plant	
2	2	2	2	n	y	y	Sparse but large flowers, interesting flower color, catalog description record 3-5 ft height, hardly	
2	3	3	3	n	n		Tiny flowers dwarfed in the garden early in the season, excellent compact very bright flowers, needs close spacing to fill in bed	
3	3	3	3	n	n	y	Poor growth in 2002, better in other years including 2003, needs deadheading, best small white zinnia of haageana type, All America Selections Gold Medal winner	
4	4	4	4	n	y	y	Abundant small flowers cover this plant, excellent color nearly all season, great filler or accent plant	
3	3	3	3	n	y	y	Interesting flower shape, upward recurved petals, flowers are tiny for size of plant, not showy except in mass plantings	

^z 0= dead; 1= poor, diseased, rotten or not showy; 2= fair, other cultivars of its kind have been better; 3= good, worth growing, nice ornamental; 4= outstanding quality, the best of its kind grown in the garden.

Table 4. Results of tested cultivars in containers for 2003.

Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y												Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers								
Bidens Calibrachoa	Peter's Gold Carpet®	yellow with brown centers	6	14	¾	1	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼										n	n		
	Liricashowers Coral Vein	coral with yellow centers	4	8	1	1¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼													
Dichondra Dichondra	Emerald Falls Silver Falls																	n		
Geranium Japanese-mat Rush	Ringo White	white	8	12	3½	4½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											y	n	
	Unicorn		8	12														n		
Joseph's Coat	Purple Knight	burgundy foliage	-	-	-	-												n	n	
Lantana	Patriot Sunbeam	yellow	4	8	1	1¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Licorice plant	Silver Mist																	n		
Linaria	Fantasy Yellow	yellow	4	8		¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼													
Lobelia	Regatta Mix	rose, blue, white	1	9	⅛	¼	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	
Ornamental Millet	Purple Majesty	burgundy	30	36	1 x 6	1½ x 9												y	y	
Ornamental Sweet Potato	Sweet Caroline Bronze		-	-	-	-												n		
Pansy	Imperial Antique Shades	coral, peach, white shades	6	9	2	2½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											y	y	
Petunia	Ruffles™ White Trailing Double	white	6	15	2½	3½	☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼☼											n	n	

^w if the plant is uniform in height, the height is recorded under max only.

^x if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

^y ☼ indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
3	3	3	3	n	y		Not as rangy as 'Golden Goddess', excellent container plant, more proportional to other plants in the containers	
3	3	3	3				Plants branched well filling in the containers, covered with blooms all season	
		1	1	n	n		Did not spread or fill in well during the season, not visible in containers, overshadowed by other plants	
2	2	2	2	n			Flowered well in containers but did not fill in, not very showy	
		3	2		y		Ornamental green spikes curled into corkscrews, unusual foliage but not very showy in containers, spikes are too short to be showy in large containers, probably better in mass plantings	
1	1	1	1	n	n	n	Grown in ground beds in 2002- very poor growth, in 2003 grown in containers- no improvement in growth, expected spreading rambling habit, got very short purple shoots that did not spread, worthless	
2	2	2	2	sl	n	n	Very colorful flower clusters but plants remained tiny and were overwhelmed by nearby plants in the containers, colorful early in season but disappeared later	
		1	1	sl	y	y	Nice mass of spreading and upright stems, smaller leaves than other licorice plant varieties, excellent contrast with other container plants	
2	1	1	1				Clumps of bright yellow color early in season but declined early, needs significant deadheading by midseason to keep flower color, high maintenance	
3	3	2	3	n			Great filler for baskets, excellent mix of colors, works well with a variety of flowers	
1	1	1	2	n	y	y	In 2002 grown in raised beds- never flowered, purple foliage was yellowish and poor. In 2003 grown in containers- growth was taller, purple flower spikes formed very late in season, foliage was dark purple but showed lots of wind damage, papery, torn edges, gray scarring, not attractive, All America Selections Gold Medal Flower Award 2003	
		1	1		n		Foliage developed a sickly yellowish tinge on top of mahogany coloration, plants did not spread or develop a vining habit, the small leafy clumps were worthless in containers	
3	3	3	3	n	y		Attractive mix of pastel shades, grows well in containers	
1	1	1	1	n			Poor spread in containers, nothing trailing about this cultivar, few blooms, did not spread to fill in bed, large double white flowers but too few to recommend	

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Table 5. Test results on completed cultivars

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Ageratum	Blue Horizon	3.7	9.3	3.7	5.8	14.2	2.5	1.7	3.7	2.3
Ageratum	Hawaii Shell Pink	2.3	2.5	2.7	2.2	5.3	.3	1.2	2.3	3
Bachelor's Button	Midget Mix	1.7		1.7	4.2	9.7	.8	1.6	2	1.7
Bidens	Golden Goddess	2.3	8.7	2.3	11.7	30.3	1.2	1.7	2.3	2.3
California Poppy	Thai Silk Lemon Bush	3.3		3.3	8.2	15.7	1	2	3.3	3
Centaurea	The Bride	2		2	10.3	21.5	1	2.6	2	2
Chrysanthemum (coronarium)	Primrose Gem	3.7	5	3.7	10.3	26.8	1.2	2.3	3.7	2.7
Cleome	Colour Fountain Mixed	3		3	32.7	46.3	2.3	2.3	3	3
Cleome	Queen Mix	3	10	3	31	46			3	2
Cleome	Sparkler Blush	2	18.7	2	26.3	33.3	3 x 3.5	3.6 x 5	2	2
Cosmos	Gazebo White	3.7	15.7	3.7	16.7	29.7	1.8	3.9	3.7	2.3
Cosmos	Pied Piper Red	2.7	10	3	20	33	1.7	2.9	3	1.3
Cosmos	Sensations Mix	3.3	11	3.3	20.7	33.2	2.3	4.1	3.3	3
Cosmos	Versailles Mixed Colors	3.7	16.7	3.3	16.3	31.5	2.1	3.8	3.3	2.3
Cosmos	Yellow Garden	1.3		3	28.7	45.3	1.7	2.8	1.3	1.3
Cosmos bipinnatus	Versailles Carmine	1.7		2	21	27.3	1.3	2.7	2	1.7
Dahlia	Bishop's Children	2.8	10	3	9.3	18.3	1.6	2.9	2.7	2.3
Dahlia	Figaro	2.7		2.7	10.7	14.7	2	4.2	2.7	3
Dianthus	Bouquet Purple	3.3	6	3	12.2	22	1	1.4	3.3	2.3
Dianthus	Diamond Blush Pink	2		2	4.3	6	.7	1	2	1.7
Dianthus	First Love	2		2	4.3	14.3	1.1	1.3	2	2
Dianthus	Floral Lace Picotee	2		2	4.3	6.7	.9	1.2	2	1.7
Dianthus	Floral Lace Salmon	2.7	4	2.7	3.2	10	1.1	1.7	2.7	1.7
Dianthus	Floral Lace White	3	2.2	2.7	5.5	10	1.2	1.8	3	2.3
Dianthus	Melody Pink	3.7		3.3	11	25.2	.8	1.4	3.7	3.7
Dianthus	Raspberry Parfait	2.3	1.7	2.3	3.2	5.5	.8	1	2.3	1.7
Drumstick Flower	Goldstick	2.8	13.7	3.2	19.7	36.1	.8	1.2	2.8	1.7
English Daisy	Lipstick	3.7	3.7	3.7	3.3	11.7	1.1	2.2	3.7	3.7
Everlasting	Ebony 'N Ivory	3	5.3	3	6.2	19.5	.8	2	3	3
Everlasting	Ebony Rouge	3	9.7	3	9	19.3	.8	1.8	3	2.7
Gazania	Daybreak Mix	4	6.5	3.7	9.3	14.3	1.9	3.3	4	4
Geranium	Black Velvet Rose	3.3	6	3.7	7.2	15.7	1.3	2.6	3.3	3
Geranium	Maverick Violet	3	6.3	3	8.2	14	1.8	3.6	2.7	2
Geranium	Orange Appeal	3		3	9	13.6	1.2	2.8	3	3
Godetia	Amethyst Glow	2		2	7.3	20.3	1.3	1.9	2	2
Godetia	Thoroughly Modern Millie	3	4.7	2.3	4.3	16.7	1.5	2.7	3	3
Impatiens, Garden	Dazzler Pink Improved	2	.5	2	2.3	4.3	1.3	1.6	2	1
Impatiens, Garden	Showstopper Cotton Candy	1.7	.4	1.7	.8	2.5	.8	1.1	1.7	.7
Joseph's Coat	Purple Knight	1	3.7	1					1	1
Larkspur	Snow Cloud	1	15.7	1	10	23.7	.5	1.2	1	1
Larkspur	White King	1.7		1.7	9.3	22			1.7	1.7

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Table 5 Test results on completed cultivars, cont.

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Lavatera	Silver Cup	1.3		1	11.3	19.7	1.3	2.2	1.3	1.7
Linaria	Fantasy Mix	3.3	5.2	3.3	4.2	12.8	.4 x .8	1.3 x 1.8	3.3	3.3
Malope	Choice Mix	3.7		3.3	22.3	33.7	1.5	3.3	3.7	2.3
Marigold, African	Atlantis Mix	3.3	6	3.3	6.3	11.8	2.1	4	3.3	3.3
Marigold, African	Discovery Orange	3.2	4.2	3.2	4.8	9.3	2.1	4.1	2.8	3
Marigold, African	Mesa Gold	3.3	1.3	3.3	6	8.5	2.2	3.9	3.7	3
Marigold, African	Mesa Yellow	3.2	4.3	3.2	4.2	9.7	1.9	3.8	2.8	3
Marigold, African	Snowball	3	3.3	3	9.2	13.7	1.8	3.4	2.7	2.3
Marigold, African	Sweet Cream	3.2	3.7	3.2	10.7	16.3	1.8	3.3	3.2	3
Marigold, French	Bonanza Bee	3	1.3	3	2.5	9	1.2	2.5	2.7	3
Marigold, French	Bonanza Bolero	3	1.3	3	5.7	10.3	1.8	2.7	3	3
Marigold, French	Bonanza Gold Improved	3	3.5	3	3.5	10.2	1.3	2.7	3	3
Marigold, French	Bonanza Orange	3.3	5.3	3.3	5.3	10.1	1.3	2.8	3.3	3.3
Marigold, French	Bonanza Yellow	3	3.7	3	2.5	9.3	1.3	2.5	3	2
Marigold, French	Durango Gold	2.7		2.7	4.2	10.3	1.5	3.2	2.7	3
Marigold, French	Durango Mix	1.7		2.7	4.5	11.7	1.4	3	2.3	2.7
Marigold, French	Durango Orange	3.3	2.3	3.3	6.7	9.7	11.7	22.6	3.3	2.3
Marigold, French	Durango Yellow	3	2	3	5.5	9.8	1.3	2.5	3	2.3
Marigold, French	Juliette	3	2.7	3	6	15	1.5	2.8	3	2
Marigold, French	La Bamba	3.7		3.7	8.8	27.3	1	2.2	3.7	3.7
Marigold, French	Moonlight	3.3		3.3	9.7	19.3	1.7	2.8	3.3	3
Marigold, French	Mr. Majestic	3.3	7	3.3	4.8	14.8	1.1	1.8	3.3	2.3
Marigold, French	Safari Primrose	3	2	3	4.3	10.2	1.5	2.7	3	2.3
Marigold, French	Safari Red	3.2	2.2	3.2	6.8	10.5	1.6	2.6	3.2	2.3
Marigold, French	Zenith Red	2	2.3	2	7.5	15.7	1.4	2.8	2	1
Triploid										
Marigold, Signet	Lemon Star	2.3	4	2.3	8	17.6	.7	1.3	2.3	1.3
Mexican Sunflower		3	7.7	2.7	32.2	56	2.2	3.8	3	2
Nasturtium	Golden Gleam	3.3	4.7	3	9.3	18.7	1.8	2.5	3.3	3.3
Nasturtium	Jewel Mix	3	22	3	8.3	30	1.6	2.4	3	2.3
Nasturtium	Strawberries and Cream	3	7	3	9.3	16.7	2	2.5	3	2
Nemesia	Tapestry	2.3	3	2.3	4.8	13.7	.6	.9	2.3	2.3
Nicotiana	Fragrant Cloud	3.7	9.3	3.7	22.7	41.3	1.4	3	3.7	3.7
Nicotiana	Only the Lonely	2.7	10	2.3	35	53.3	1.0	1.5	2.7	2
Nicotiana (alata)	Saratoga Deep Rose	3.3	6.3	3	7.5	14	1.3	1.8	3	2.3
Nicotiana (x sanderae)	Merlin Peach	1		1	7.7	14.3	1.3	2.2	1	1
Pansy	Bingo Clear White	3.3	5	3.3	4.3	10.8	1.1	2.8	3.3	2.3
Pansy	Can Can F1	2.3	6.3	2.3	6.8	12.7	1.2	2.4	2.7	2
Pansy	Contessa Ruffled Mix	3.3	6.3	3	4.3	9	1.7	2.9	3.3	2.3
Pansy	Copperfield	1.7		1.7	3.5	8.3	.8	1.7	2	2.3
Pansy	Fama Clear Faced Mixture	3.7	3.3	3.7	8.7	14	1.3	2.4	3.7	2.7

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Table 5 Test results on completed cultivars, cont.

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Pansy	Fama Mixed Colors	3.7	7.9	3.7	5.3	14.8	1.4	2.5	3.7	2.3
Pansy	Impressions Mix	3.7	4.5	3.7	13.7	19.5	1.4	2.3	3.7	2.3
Pansy	Light Strawberry Sundae	3		2.7	3.7	11.5	1.2	2.4	3	2
Penstemon	Sensation Mix	2.7	5.7	2.7	13.3	26.2	5 x 2.5	10 x 4	2.7	1.7
Petunia	Carpet Blue	2.7	3.3	2.3	8	13	1.8	2.6	3	1.7
Petunia	Carpet Lilac	3	2.7	2.7	6.3	12	1.6	2.2	3	2
Petunia	Carpet White	2.3	4.7	2	9.5	13.7	1.8	2.3	2.3	2.3
Petunia	Double Cascade Mix	3	4.3	3	6	14.2	2.7	4.2	3	2
Petunia	Double Cascade Orchid Mist	3	8	3	5.5	14.8	2.4	4.1	3	3
Petunia	Double Cascade Pink Soft	3		2.7	6	12.2	2.6	4	3	2.7
Petunia	Dreams Midnight Improved	3	3.2	2.7	7	12.5	2.7	3.5	3.3	2.3
Petunia	Dreams Red	2.7	3.3	2.7	8.7	14.7	1.8	2.8	2.7	2
Petunia	Dreams White	2	6.3	1.7	6.3	13.3	1.9	2.9	2.3	1.3
Petunia	Fantasy Mix Ball	2.7	3.5	3	4.2	10.3	.9	1.8	2.7	2.3
Petunia	Madness Lilac	2.7	4	2.7	8.7	16.8	2	3	2.7	2
Petunia	Madness Magenta	3	2.7	3	6.2	13.3	1.7	2.7	2	3
Petunia	Madness Mix Merlot	3	4.3	2.7	5.3	12.7	2.2	2.8	3.3	3.3
Petunia	Madness Royal	2.8	3.3	2.5	8.3	16.2	1.6	2.8	3.2	1.7
Petunia	Madness Sheer	1.7	3.7	1.7	11.2	13.7	2	2.7	1.7	1
Petunia	Madness Total	3	5.7	3	8	16.3	2.2	3	3	2
Petunia	Prism Sunshine	2.5	6.3	2.3	11.7	18	2	2.8	2.3	2
Petunia	Tidal Wave Cherry	3	6.3	3	11.3	30.7	1.4	2.2	3.3	2.3
Petunia	Tidal Wave Hot Pink	3.3	6	3	9.3	25	1.3	2	3.7	2.7
Petunia	Ultra Salmon Morn	2.5		2.7	5.8	12.7	1.8	3.7	2.3	2
Phlox, Hybrid	Mount Hampden	2.3	1.3	2.3	4	8.3	.3	.8	2.5	2.3
Portulaca	Margarita Rosita	2.3	2.7	2.3	1.7	6	.8	1.8	2.3	2
Portulaca	Sundial Peach	2.3	2.5	2.3	2.3	5.8	1.1	1.9	2.3	2.3
Rudbeckia	Cherokee Sunset	2.8		2.8	13.7	26.7	2.8	5.5	2.8	2
Rudbeckia	Chim Chiminee™	2.7		3	12.7	29.3	2.7	5.8	2.3	2.7
Rudbeckia	Indian Summer	3.7	4.3	3.7	22	36.3	3.6	6.2	3.7	3.7
Rudbeckia	Irish Eyes	3	5.3	3	10.7	33.8	3.8	6.3	3	3.3
Rudbeckia	Rustic Colors	3.3	6	3.3	14.7	29.3	2.5	4.8	3.3	2.7
Rudbeckia	Sputnik	3.7	5.7	3.3	16	31	2.3	4.2	3.7	2.7
Rudbeckia	Sputnik (Kelvedon Star)	2		2	11	20.5	1.4	3	2	2
Salvia	Victoria	3.3	5	3.3	2.7	28.7	3 x 1	7 x 1.3	3.3	3.3
Salvia, Scarlet	Empire Orange Bicolor	2	3	2	6.3	11	4.7 x 1.8	5 x 2	2.3	1.7
Salvia, Scarlet	Empire Salmon	2.7		3	9.2	11.8	3.3 x 1.7	4.6 x 3	2.7	1.7
Salvia, Scarlet	Orange Zest	3.2	5	2.8	8.3	14.3	4 x 2	8 x 3	3.2	2.3
Salvia, Scarlet	Red Hot Sally	2.7	7.2	2.3	8.2	13.2	4.5 x 2.4	7 x 3	3.3	2.3
Salvia, Scarlet	Salsa Salmon	2.3	5.5	2.3	7.7	11	3.1 x 2.1	5 x 2.5	2.3	2
Salvia, Scarlet	Vista Red	2.3	6.7	2.3	8	13.7	4 x 2.3	7 x 2.8	2.3	1.7
Sanvitalia	Irish Eyes	3.8	4.3	3.8	4	10.5	.7	1	3.8	2.7

^z 0= dead; 1= poor, diseased, rotten or not showy; 2= fair, other cultivars of its kind have been better; 3= good, worth growing, nice ornamental; 4= outstanding quality, the best of its kind grown in the garden.

Table 5 Test results on completed cultivars, cont.

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Sanvitalia	Mandarin Orange	3.8	2.5	3.8	7	14	.8	1.2	3.8	2.7
Scabiosa	Salmon Queen	2.7	6	2.7	9.7	25.5	1.7	2.3	2.7	3
Shasta Daisy	Crazy Daisy	2		2	12.3	19	1.9	3.3	2	2
Shasta daisy	Silver Spoons	2.7	6.3	3	15.3	38.2	1.7	3	2.7	1.7
Snapdragon	Black Prince	3.3	3.3	3.3	10.3	20.5	3 x 2.5	9 x 3	3.3	2
Snapdragon	Brazilian Carnival	3	5	3	14.5	29.3	5 x 2.7	10 x 3.5	3.3	2
Snapdragon	Double Azalea Apricot	3.3	2.7	3.3	12	30.3	5.3 x 3	10 x 3.8	3.3	3.3
Snapdragon	Floral Showers Purple	2.7	3.3	2.7	4.2	9.25	1.1 x 1.3	1.8 x 3.7	2.7	3
Snapdragon	Freesong White	3.2	8.3	3.2	11.7	25.8	2.8 x 1.3	10 x 2.8	3.2	1.7
Snapdragon	Hobbit Dwarf Mix	3	6	3	6.3	15.3	3 x 2	5 x 3	3	2
Snapdragon	Liberty Cherry	3.3	8	3.3	13	21.7	5 x 2.5	8 x 3.8	3.3	3.3
Snapdragon	Pink Bells	2.7	4	2.7	5.7	14.4	2.3 x 1.8	3 x 2.3	3	1.7
Snapdragon	Ribbon Yellow	3	3	3	11.3	22.7	5 x 2.5	12.5 x 3	3	3
Snapdragon	Rocket Mix F1	3.2	8	3.3	15.5	32.3	4.3 x 2.8	11 x 3	3	3.3
Snapdragon	Tahiti Mauve	2.5	2.3	2.5	5.3	12.7	2.8 x 2.3	6 x 2.8	2.8	1.7
Statice	Sirima	4	5.3	3.7	14.3	30.7	.2	.3	4	2.7
Stock	Legacy Mix	4	8.7	4	12.7	22.2	3.1 x 1.7	8 x 2	4	2.3
Strawflower	Salsa Mix	4	11	3.7	21.5	44.3	1.3	2.5	4	4
Sunflower	Bohemian Rhapsody	3	10	3	26.3	54	2.6	6.3	3	3
Sunflower	Chianti	3		3	41	52.3	3.3	6.2	3	3
Sunflower	Dorado	3	7.7	3	30	34.7	3.8	6.5	3	3
Sunflower	Giant Sungold	3	13.3	3	54	61	5	9.7	3	2
Sunflower	Ikarus	3	13.3	3	28.2	45.7	2.9	6.3	3	3.3
Sunflower	Infrared Hybrid	3		3	36	60	5	6.7	3	3.3
Sunflower	Lemon Flair	2.3		2.3	28.5	36.8	3.2	6.2	2.3	2.3
Sunflower	Park's Velvet Tapestry	3		3	58.7	79	4.5	6.7	3	3
Sunflower	Ring of Fire	2.8	7	2.5	21.3	45.3	2.9	5.5	2.8	3
Sunflower	Soraya	3	13.3	3	42.7	65.7	5.2	6.8	3	3
Sunflower	Starburst Aura	2.8		2.8	3.5	42	4.5	6.8	2.8	3
Sunflower	Sunbeam	3.2	15	3.2	41	55	5.5	7.7	3.2	2
Sunflower	Sundown	3	13.3	3	39.3	51.7	4.5	6	3	2.7
Sunflower	Tiger's Eye Mix	3		3	48.7	64.7	4.7	7.7	3	3
Sunflower	Vanilla Ice	3		3	49.7	58.3	3.3	4.4	3	3
Venidium	Jaffa Ice	3.5	8.3	3.5	21.3	43	2.2	3.7	3.5	2.3
Venidium	Orange Prince	2.8	8.3	2.8	2	39.3	2.3	3.8	3.2	1.7
Verbena	Moon River	1.8	5	1.8	10.3	20.5	.3	.3	1.8	1
Verbena, Garden	Crystal Ball Mix	2.8	2.7	3	6.3	12.7	.4	.7	2.8	3
Verbena, Garden	Quartz Burgundy	3.3	3.3	3.3	4	11.7	.6	.9	3.3	3
Verbena, Garden	Quartz Formula Mix	3	2.7	3	6.9	13.3	.4	.5	3.3	2.3
Verbena, Garden	Quartz Mix Waterfall	3.3		3.3	3.7	13.3	1.5	2.5	3.3	3.3
Verbena, Garden	Quartz Mix Waterfall	3.3		3.3	3.8	12.3	1.1	1.8	3.3	3.3
Verbena, Garden	Quartz Polka Dot Mix	3	3.5	3.3	6.7	13	.9	1.2	3	1.7

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Table 5 Test results on completed cultivars, cont.

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Verbena, Garden	Quartz Scarlet	3	5	3	4.2	11	.8	1.8	3	3.3
Verbena, Garden	Quartz White	3	5.3	3	4	11.8	.9	1.8	3	3
Verbena, Garden	Romance Pastel Mix	1.7	2.7	2	5.8	11	.4	.6	2	.7
Verbena, Garden	Tickled Pink	3	2.5	3.3	5	9.7	.8	1.1	3.3	3
Viola	Four Seasons Golden Yellow	4	5.7	4	7.9	21.8	.9	1.3	4	2.7
Viola	Penny Porcelain	3.7		3.7	5.3	13.2	.9	1.3	3.7	4
Viola	Sorbet Blueberry Cream	3.7	7.3	3.7	7.3	15.5	.9	1.4	3.7	2.7
Viola	Sorbet French Vanilla	3.5	2.3	3.5	6.7	12.3	.9	1.3	3.5	2.7
White Mignonette		3.3		3.3	22.3	37			3.3	3.3
Zinnia, (angustifolia)	Crystal White	2.8		2.8	5.1	11.3	.9	1.4	2.8	2.7
Zinnia, Garden	Benary's Giant Formula Mix	3	5	3	9.7	24	2.6	4.4	3.7	2
Zinnia, Garden	Benary's Giant Golden Yellow	3	7.3	3	14	25.5	2.3	3.6	3	1.7
Zinnia, Garden	Benary's Giant Salmon Rose (Blue Point Eldorado)	3.3	6	3.3	16	27.3	2.3	4	3.3	2
Zinnia, Garden	Blue Point Formula Mix	3	4.7	3	14.3	28	2.4	3.8	3	2.3
Zinnia, Garden	Dreamland Coral	3	7.3	3.3	6.7	2.5	1.8	3.7	3	3
Zinnia, Garden	Oklahoma Mix	2.3	6	2.7	14	26	1.4	3.4	2.3	2
Zinnia, Garden	Oklahoma Scarlet	2.2	6.3	2.5	10.7	29.3	1.3	2.4	2.2	1.7
Zinnia, Garden	Park's Picks Mix	3	4	3	16.3	28.3	1.5	4	3	2
Zinnia, Garden	Small World Pink	3	4.7	3	10.3	17.3	1.4	2.3	3	2
Zinnia (haageana)	Profusion White	2.3	4.3	2.3	3.3	13.2	.9	2.4	2.3	2.7
Zinnia (haageana)	Star Gold	3	3.3	3	5.3	13	1	1.8	3.3	2
Zinnia (haageana)	Star Orange	3.5	2.7	3.5	6.8	12.2	1	1.8	3.5	2.7
Zinnia, Peruvian	Bonita Red	2.2	8.7	2.5	19.7	34.3	.8	1.5	1.8	1.7
Zinnia, Peruvian	Bonita Yellow	3.7	7.7	3.7	12.5	26.7	.8	1.7	3.7	2.7
Zinnia (tenuifolia)	Red Spider	2.3	14.3	2.3	7	29.5	.8	1.5	2.3	2.3

Special Thanks!

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List of Seed and Plant Sources:

Alaska Greenhouse, 1301 Muldoon Rd., Anchorage AK 99514
*Alaska Native Plant Society, PO Box 141613, Anchorage AK 99514
Alberta Nurseries & Seeds Ltd., Box 20, Bowden Alberta TOM 0K0
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*American Rock Garden Society, PO Box 67, Millwood NY 10546
*American Horticultural Society, PO Box 6118, Alexandria VA 22308
Applewood Seed Co., 5380 Vivian St., Aruada CO 80002
B&D Lilies, PO Box 2007, Port Townsend WA 98368
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Gardens North, 5984 Third Line Road North, North Gower Ontario K0A 2T0 Canada
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Select Seeds, 180 Stickney Hill Rd., Union CT 06076
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