

Annual Flowering Plant Evaluations 2008

By:

Patricia S. Holloway
Grant E. M. Matheke
Etta Gardiner
Jan Hanscom
Judy Weber

Student interns:

Brittany Blackwell
Matthew Dunton
Jill Michalak
Shannon Pearce
Colin Taylor



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Volunteers:

Vicki Hill
Eieleen Van Whye

Agricultural and Forestry Experiment Station

University of Alaska Fairbanks
SNRAS/AFES Information Services
P.O. Box 757200
Fairbanks, AK 99775-7200
fynrpub@uaf.edu • www.uaf.edu/snras • http://snras.blogspot.com
907.474.6923 or 907.474.5042
fax: 907.474.6184

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Sunflowers at the Georgeson Botanical Garden, fall 2008.



INTRODUCTION

Each year more than 300 annual flowering plants are grown in field trials at the Georgeson Botanical Garden. The annual flower trials were planted from 30 May to 5 June, 2008 in the Annual Flower and All American Selections (AAS) Display Garden of the Georgeson Botanical Garden (64° 51'N, 147° 52'W). The Fairbanks silt loam soils (pH 6.5) have been cultivated since 1910 and have been amended repeatedly with manure and more recently compost. The field beds were fertilized with 10-20-20S (4 lbs per 100 sq. ft., 195 g per sq meter) on 30 May. Baskets and containers were filled with equal parts Triple R® brand composted soil mix (Risse Greenhouses) and Pro Mix® Bedding plant soilless potting mix supplemented with Terra.Sorb® water absorbing crystals. Flowers were grown as seedling transplants with the exception of the sweet peas, swiss chard, and scarlet runner beans that were direct seeded. Transplants were hardened off outdoors for one week prior to transplanting.

All cultivars in garden beds were planted according to recommended commercial spacing guidelines in

unreplicated beds. Plant numbers varied according to plot size. The granular herbicide Preen® (Trifluralin), was applied on 13 June to all plots. Plots were irrigated as needed throughout the summer.

Weather data were compiled annually from a U.S. Weather Service station, elevation 475ft (145m), located approximately 350ft (107m) west of the garden. The summer was cool and overcast especially July through September with average daily maximum and minimum temperatures cooler than the previous two years (Tables 1 and 2). The total thaw degree days ranked the 2008 season the third coldest since 1998 in total heat accumulation during the growing season (Table 2). 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 deformities (Table 3). From 10 Aug to 25 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 on September 19, 2008. Each cultivar grown in the garden beds is tested for at least three years depending upon the availability of seed or plugs. (Table 4).

Most ornamentals grew well except for those such as cardoon, castor beans, amaranth, and impatiens that only perform well in very warm seasons. Cool season vegetables grew well, but warm season ones had disappointing yields. Sweet corn did not mature. Gardeners around the Tanana Valley complained of size and quantity reductions in flowers, fruits, and vegetables, and delayed ripening especially in those crops requiring warm seasons. Although it was not a record breaking season, 2008 certainly was not one to brag about.

The garden beds continue to be plagued by a severe infestation of *Sclerotinia* cottony rot, and we learned this summer they also host a healthy population of pin nematodes, a severe plant pathogen in other regions but unknown to the GBG gardens until soil testing this summer.

Table 1. Weather data from the U.S. Weather Service station located just west of the garden for years 1998 – 2008.

Season	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Average temperature: (°F)											
May	49	46	44	45	50	44	52	56	50	50	47.8
June	58	61	59	57	58	61	66	67	59	60	58.2
July	62	61	59	61	61	61	65	63	62	64	58.9
Aug	52	58	52	57	54	55	62	58	55	60	52.6
Sep	46	45	41	49	47	41	38	46	50	47	45.5
Maximum temperature (°F)	87	91	83	95	85	82	90	85	80	84	84
Growing season:											
Last frost	May 13	May 29	May 15	May 13	May 12	May 24	May 8	May 5	June 4	May 13	May 30
First frost	Sep 13	Sep 11	Sep 16	Sep 24	Sep 2	Sep 13	Sep 4	Sep 2	Sep 25	Sep 22	Sep 21
Frost free days	123	105	124	134	113	112	119	120	112	132	113
Thaw degree days*	3278	3383	2943	3439	2980	3123	3751	3767	3523	3728	3185.5
Rainfall (inches)	9.87	8.66	8.55	5.80	9.35	9.91	5.6	10.59	7.86	11.32	8.96
Previous winter season:											
Minimum temperature (°F)	-48	-54	-50	-27	-36	-35	-45	-50	-49	-41.7	-46.1
Snowfall (inches)	30.6	31.6	62.2	39.9	39.7	33.2	51.7	70.9	51.8	25.2	46.9

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

Table 2. Weather data summaries for growing season years 2006 – 2008.

	May			June			July			August			September		
Temperature °F	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
Average daily maximum	63	62	60	69	72	69	71	76	68	65	71	63	61	57	56
Monthly high	75	80	69	80	84	81	83	84	84	72	84	74	69	71	70
Average daily minimum	38	38	36	48	49	47	52	52	49	45	48	42	38	37	36
Monthly low	27	28	23	30	41	39	46	44	42	36	39	35	29	22	15
Rainfall (inches)	0.20	0.90	0.54	1.15	2.66	1.94	3.42	4.12	3.65	2.48	1.85	2.26	0.61	1.79	0.57

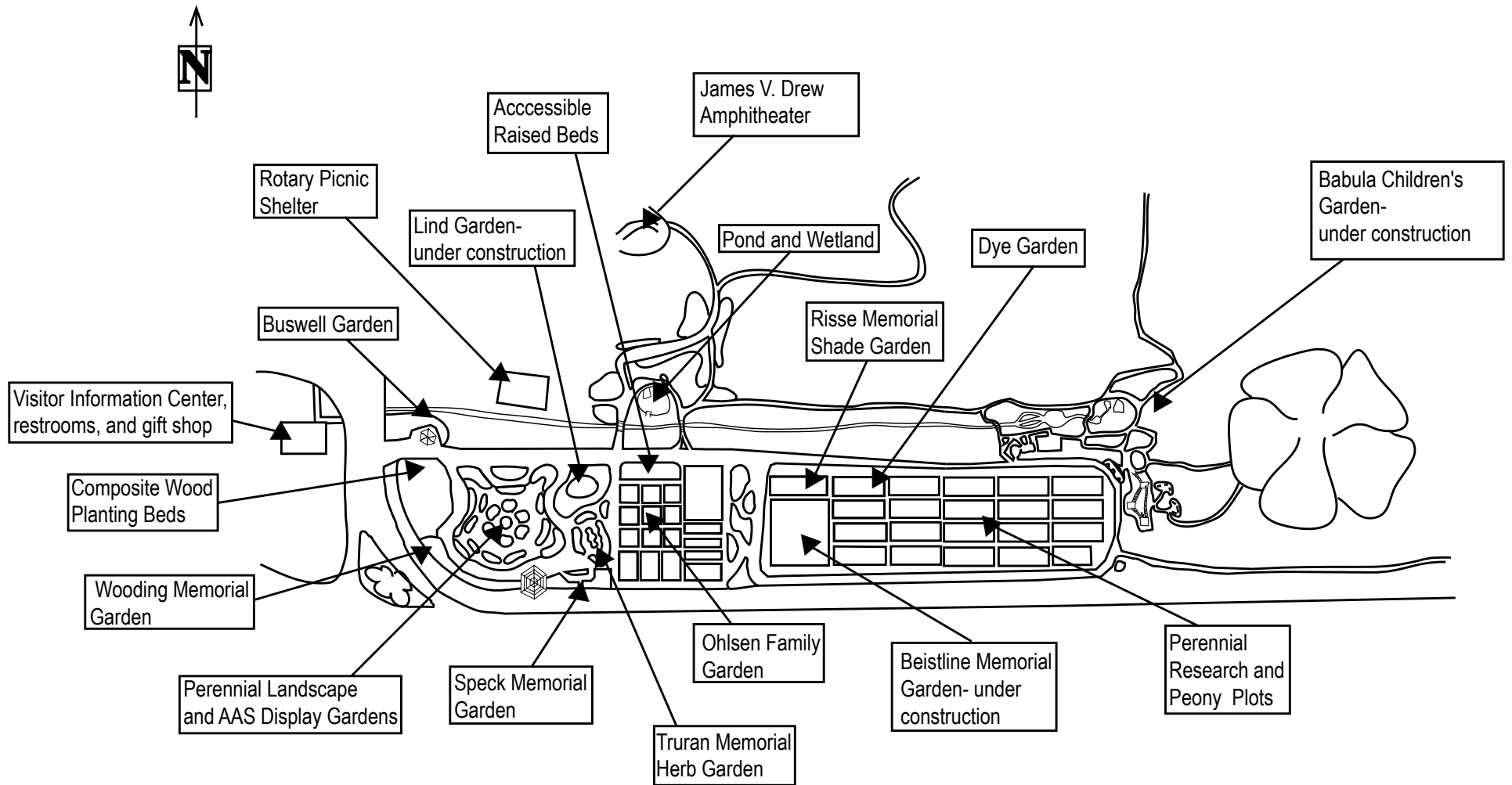


Table 3. Results of tested annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y														
			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
African Daisy**	African Moon	cream w/ blue centers	17.25	7.25	1.75	.9	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
African Foxglove		cream and pink	24	20	0	0							☼	☼	☼	☼					
Alternanthera	Royal Tapestry																				
Alyssum, Sweet	Clear Crystals Lavender Shade	lavender	6	2	1.25	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Alyssum, Sweet	Clear Crystals Purple Shade	purple, lavender	6	1	1.25	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Alyssum, Sweet	Clear Crystals White	white	7	1.5	1.125	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Alyssum, Sweet	Rosie O'Day	rosy lavender	3	1	1x.75	.25x.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Alyssum, Sweet	Royal Carpet	purple, lavender	14	2.5	1	.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Amaranth	Dreadlocks	burgundy	26	20	5.5x1.25	2.25x.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Amaranth, Feathered**	Autumn Palette		31	21	12.5x2.5	4x3.25			☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Amaranth, Feathered	Icecream Banana	pale yellow	6	4	1.25x3	1.25x1				☼	☼	☼	☼	☼	☼	☼	☼				
Amaranth, Feathered	Icecream Orange	orange	7.5	4.5	2.5x.75	1x.75			☼	☼	☼	☼	☼	☼	☼	☼	☼		☼		
Amaranth, Tricolor	Aurora	shades of peach	13	7													☼	☼			
Amberboa		lavender	27	8.5	2	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Ambrosia**		green	14	3							☼	☼	☼								
Annual Sea Holly		lavender	30	21																	
Aster, Annual Garden	Ballet Mix	white, pink, rose, lavender	18	6	5	2.75					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Aster, Annual Garden	Starlight Mixed Colors	bright blue, sky blue, scarlet, and rose	10	5.5	4	1.5				☼	☼	☼	☼	☼	☼	☼	☼				
Aster, China	Matsumoto Red Stripe	maroon w/ white stripes	23.5	4	3	1.75					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	

w: If the plant was uniform in height, the height is recorded under max only. * = plants grown in containers or hanging baskets, limited data was collected on plant height, flower size and flowering dates.
x: If flower size was uniform, size is recorded under max only; sizes with an x (ex.: 12x3) indicates a spike flower type with the height x width. ** = plants grown in raised beds.
y: ☼ indicates just starting to bloom, ☼ indicates 50% bloom, and ☼ indicates full bloom.

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	1	1	1	1	n	n	n	Bushy plant with floppy open stems; not very showy and easily overwhelmed by adjacent plants; died early in 2008
	n	n	1	1	1	1	n	y	n	No blooms this summer; plants did not grow
	n				1	1	n	y	n	Slightly trailing foliage with deep purplish red stems and small pointed leaves; cannot be recommended for ground beds; sparse growth, very little spread
	n	n	1	1	1	1	sl	n	n	Low-growing ground cover full of blooms all summer; holds up well; some flower size and plant size differences with different flower colors; lots of dead plants by mid September before frost
	y	y	1	1	1	1	y	n	n	Good mix of purple shades in this mounding ground cover; lots of dieout in early September
	y	y	1	1	1	1	y	n	n	Nice low-growing ground cover; fragrant; some die out in early September
	y	y	1	1	1	1	y	n	n	Compact carpet of color; fills in well; best for front of borders; All America Selections winner 1961
	n	n	3	3	3	3	y	n	n	One of the largest alyssums grown; spreads and fills in well; interesting mix of purple colors; some dead centers by mid August; All America Selections winner 1953
			4	4	4	4	n			Drooping fingers of flowers cascade at the top of the plant; do not branch but remain a single stalk with yellow-green foliage tinged with red; good show when used in mixed beds as background plants
	n	n	4	4	4	4	n			A few poor shoots survived the summer with some blooms; not at all attractive probably because of cold weather
	n	n	2	2	2	2	n	n	n	More branched than other Amaranths; needs close spacing; ugly yellow-green, brown-spotted foliage
	n	n	2	2	2	2	n	n	n	Stout spikes with yellow-green foliage and brilliant flower heads; needs close spacing; little branching; foliage is sickly yellow green; overshadows plumes
	n		1	1	1	1	n	n	n	Very poor showing; did not grow well even in raised beds, and were eventually dwarfed by neighbors; yellow stems and leaves became brown and unsightly in early August
	n	n	3	2.5	2	2	n	n	n	Interesting needle-like petals around a whitish pin cushion center; loaded with blooms all summer; old flowers need deadheading, not very showy
	n	n	1	1	1	1	y	n	n	Poor germination; only 12 plants planted this year; grew better in raised beds than in the ground; big, bushy stalks covered with green blooms; brown seed heads are ugly in September
	n	n			2	2	n	n	n	Bushy plant with spiky foliage; no blooms this year
	n	n	4	4	4	4	n	y	y	Big powderpuff-sized blooms; great mix of colors; needs deadheading by mid August for best show; very ragged late in season; floppy and unattractive late
	n	n	2	2	2	2	n	y	y	Short, puffy flowers, excellent early but do not last; very ragged looking late in the season
	n	n	4	4	4	4	n	y	y	Excellent bunches of blooms on branched stems; rich color; great cut flower

z: 0=dead; 1=poor, dead, 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

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			max	min	max	min	Jun				Jul				Aug				Sep			
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2		
Australian Nicotiana	Suaveolens	white	38	16	3x10	1x2.5			*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Bachelor's Button	Jubilee Gem	royal blue	23	4.5	1.5	.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Bacopa*	Blutopia	lavender blue	5.5	4	.125	.125	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Bacopa**	Snowtopia	white	7	2	.125	.125	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*
Bidens*	Gold Star	yellow	34	15	2	1.25			⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Bishop's Flower	Graceland	white	21	10	2.25	1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Bisnaga	Casablanca	white	36	3.5	4	.75			*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Blue Spiderwort	Sleeping Beauty	blue	23	8.5	1.25	.5			*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*
Browallia		deep lavender	17	5.5	1.25	.5			*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Calendula	Orange Zinger	orange, gold highlights	28	5	3.25	1.25	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Calendula	Sherbet Fizz	peach w/ mahogany accents	23.5	12	2.5	.25	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Calendula	Triangle Flashback	peach-pink w/ dark rose backs	29.5	10	2.5	.25	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
California Poppy	Summer Sorbet	rose fading to cream in centers, pink outer petals	18	6	2.5	.75	*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*	*	*		
Candytuft		white	19	5	1.75	.75	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*	*			
Cardoon**			42	42																		
Castor Bean**	Zanzibarensis Mix	red	26	18																		
Celosia**	Burgundy Supercrest	rose	8	4	4x3.5	2.25x1.5			*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*	*	
Celosia	Fireglow	red	4.5	2.75	1.25x1.25	.25x1				*	*	⊗	⊗	⊗	⊗	⊗	⊗	*				

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	3	3	3	3	y	n	n	Tiny, trumpet-shaped white flowers, not as floriferous as other nicotianas but nice bushy background plant; would be good as a filler rather than mass plantings
	n	n	3	3.5	3.5	3.5	n	y	y	Beautiful old fashioned flower; blooms early, showy all season; All America selections winner 1937
	n	n	3	3	3	3	y	n	n	Not showy this season in containers; overwhelmed by petunias and geraniums and shaded out
	y	y	2	2	2	2	y	n	n	Beautiful bushy, cascading plant covered with tiny white blooms all summer; some deadheading needed
			2	2	2	2	y	n	n	Open, spreading, floppy stems with lots of golden blooms; must be in a very large container to keep in scale with the spread; can be overwhelming with geraniums, petunias and other shorter plants
	n	n	2	2	2	2	sl	y	y	Floppy stems make the plant appear shorter than it is; umbels not as compact as other Bishop's flowers grown this year; more like the wild Queen Anne's lace
	y	y	4	4	4	4	y	y	y	Similar to Ammi (Bishop's flower) with smaller umbel heads; stronger, straighter stems than Ammi; recommended by catalogs for greenhouse and field cut flower production; should be planted instead of Ammi; loaded with blooms until frost
	n	n	3	4	3	3	n	n	n	Tall upright stems with single blooms in the axles of the leaves; brownish seed pods are ugly; brilliant clear blue color
	n	n	3	3	3	3	sl	y	n	Bushy plants covered with blooms; vivid color and display; no maintenance needed; well worth planting
	y	y	4	4	4	4	sl	y	y	Long stems, great for cutting; very nice uniform display all season; catalog says has high resin content for medicinal tinctures and salves
	y	n	3	3	3	3	n	y	n	Tiny flowers compared to other calendulas; bushy, fills in well; needs significant deadheading; great two-toned colors
	y	y	4	4	4	4	n	y	y	Bushy plants covered with flowers in unusual peachy pink color with striking maroon edges and backs; excellent cut flower
	y	y	3	3	3	3	n	y	n	Attractive ruffled petals; outstanding color; some flowers a light rose pink, others a pale peachy pink; holds up well in wet weather
			3	3	3	3	y	n	n	Bushy plants covered with clusters of white blooms all summer; needs deadheading to avoid seed production; heirloom plants
	n	n	2	2	2	2	n	y	y	Attractive silvery foliage; huge plants with dissected, spiky leaves; flowering shoots emerged late in season with flower buds by mid September; did not bloom; needs lots of space to spread
	n	n			3	3	n	n	n	Plants grew poorly in cold, wet summer; no blooms like 2007
	n	n	3	3	3	3	n	n	n	Old fashioned cock's comb; medium-sized spikes of yellowish foliage tinged with red; spikes do not branch; cockscombs are tiny; appear late in the season; unattractive; not any better in raised beds than ground
	n	n	1	1	1	1	n	n	n	Short, unbranched spikes of brilliant color; interesting flower heads but needs closer spacing for best effect; All America Selections winner 1964

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			max	min	max	min	Jun				Jul				Aug				Sep			
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2		
Celosia	Fresh Look Gold	gold	8	3.5	1x.5	1x.25					*	*	⊗	⊗	⊗	⊗	*					
Chinese Foxglove																						
Chocolate Flower		gold w/ brown centers													*	*	*	*				
Chrysanthemum, Tricolor	Court Jester	rose, white, red, yellow w/ mahogany centers	28.5	9.5	3	.5			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Cigar Plant**		orange red w/ white ring	13.5	6.5	1.25	.25	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Clarkia	Chieftain	hot pink	48	4	1.5	.75	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Cleome**	Colour Fountain Mixed	purple, pink, white bicolor with white	47	24	1.5	1.25							*	*	*	*	*	*	⊗	⊗		
Coleus	Chocolate Dark		8	3	1	.5													⊗	⊗		
Coleus	Kong™Salmon Pink		9.5	7	3	.5													⊗	⊗		
Collinsia**	Mystic Lilac	pale lavender	7.5	7.5	3x1	3x1														⊗	⊗	
Coreopsis	Sunfire	yellow w/ burgundy center	17	12	2.25	1.25				*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Corn Parsley	Goldspray	yellow	26	4	2.5	.75	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Cosmos	Dazzler	crimson, white, pink, rose	36	18	4.0	2.0					*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Cosmos	Double Click	white, crimson, pink, rose	18	9	2.5	.75			*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*	*
Cosmos	Happy Ring	pink/rose bicolor	29	14	3.25	2	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*	*	*	*	*	*
Cypress vine**	Red	red																				
Dahlia**	Bloomquist Dawn	dark pink w/ yellow center	36	29	7	3.75									*	⊗	⊗	⊗	*	⊗	⊗	
Dahlia**	Chimicum Topaz	yellow w/orange tips	45	40	3.25	1.75									*	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Dahlia**	Citron De Cap	yellow w/rose highlights	46	44	5.25	4.5									⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Clydes Choice	pink w/burgundy edges	45	45																	*	*

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y: * indicates just starting to bloom, ⊗ indicates 50% bloom, and ⊕ indicates full bloom.

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	2	2	2	2	n	n	n	Tiny, thin spikes of electric color; needs very close spacing in ground beds for best display; colors are eye-catching but display is not very ornamental; better in containers
	n	n			1	1		y	n	Flowering shoots formed very late, but did not bloom; poor growth this year
	n	n	1	1	1	1	n	n	n	Tiny daisy flowers with brown centers; sparse through the season; not the best show; died out in early September
	n	n	4	4	4	4	n	n	n	Brilliant multi-colored blooms on floppy stems; very colorful all season
	n	n	4	4	4	4	n	n	n	Interesting tubes with white ring at tip; not showy and were easily overwhelmed by neighbors; needs mass plantings in front of borders
	n	n	4	4	4	4	y	y	n	Tall stems becoming floppy in late season; very attractive flowers, but mostly on the ground; many dead plants
	n	n	3	3	3	3	n	y	n	Very poor germination this year; only 6 plants planted
	n	n	3	3	3	3	n	n	n	Did not grow and fill in containers; just a few sticks with curled leaves, many of which rotted in late summer
	n	n	4	4	4	4	n	n	n	Poor growth in this cold summer; little height growth; did not fill in containers
	n	n	1	1	1	1	n	n	n	Big bushy plants but only a couple of blooms by the end of the season
	y	y	2	2	3	2	y	y	y	Medium sized blooms on straight stems; good for cutting; very nice contrasting mahogany markings on brilliant blooms; abundant blooms this season
	y	n	4	4	4	4	y	y	n	Looks like dill in bloom; nice filler; floppy, weak stems but masses of brilliant gold all summer; plant in masses for best effect
	n	n	2	3	3	2	n	y	y	Big, bushy, late; more bush than flowers; mostly crimson flowers this summer; not many flowers
	n	n	4	4	4	4	n	y	y	Very interesting double blooms but few are true doubles, floppy stems, needs deadheading
	n	n	2	2	3	2	n	y	n	Some flowers with distinct dark rose ring in center of petals; bushy, floppy stems; more bush than flowers
										Very poor survival in greenhouse; not planted outdoors
	n	n	4	4	4	4	sl	y	n	Very attractive bicolor flowers; loaded with blooms in late season; very attractive, semi cactus bloom style
	n	n	2	2	2	2	sl	y	n	Diseased, possibly virus, weak not many blooms until late season; semi cactus style blooms
	n	n	3	3	3	3	sl	y	n	Lots of blooms too late in the season for great display; heavily lacinated petals give lacy appearance; yellow specked leaves looks like virus
	n	n	1	1	3	3	n	y	n	Small flowers, plants covered with blooms; very nice flowers; no blooms in 2008

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Table 3. Results of tested annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y													
			max	min	max	min	Jun				Jul				Aug				Sep	
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2
Dahlia**	Emory Paul	rosy purple, lighter toward tips	40	26	2.75								*	*	*	⊗	⊗	⊗	⊗	
Dahlia**	Jayleen G.	dark peach	58	48	5.5	2							*	*	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Jo	pale yellow	48.5	45	9.0	5.0							*	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Maggie C.	yellow w/orange overtones	31	31															⊗	
Dahlia**	Mom's Special	pale lavender w/ dark lavender flecks	44.5	40.5	8.5	8.5								*	*	*	*	⊗	⊗	
Dahlia**	Papageno	yellow w/pink tips	16	16	3.5	3.5				*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗		
Dahlia**	Pat Feary	yellow w/ pink highlights	46	38	5.75	2.25							*	*	*	⊗	⊗	⊗	⊗	
Dahlia	Redskin	white, apricot, yellow, pink red	33	19	4.5	2.25					*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Robert Too	purple and white	52	40	4.5	2							⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Scarborough Brilliant	red fading to pink in centers	64	48	6.25	4.25						*	*	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Snowbound	creamy white	44	32	11.5	11.5							*	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Spartacus	dark red	42	35	5	5								*	*	*	*	⊗	⊗	
Dahlia	Star-Gazer	white, rose, orange, yellow, pink, burgundy, some bicolors	30	13	3.75	2.5	*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dahlia**	Sterling Silver	white	40	38	11	5									*	*	*	*	⊗	
Dahlia**	The Boss	dark pink	21	21																
Dianthus	Bouquet™ Rose Magic	rose, pink, white w/dark pink markings	21.5	8.5	3	1				*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dianthus	Ideal Violet	violet rose	11.5	4	1	.5	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dianthus	Magic Charms	red, white, pink	8	3.5	2.25	1.25			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Dianthus	Snowfire	white w/red centers	10	2.5	2.25	1.25			*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	2	2	2	2	y	y	n	Huge blooms just beginning to open up in mid September; lots of buds, not enough heat
	n	n	4	4	4	4	n	y	n	Very tall plant with abundant blooms; very nice dark peach color
	n	n	3	3	3	3	y	y	n	Medium sized, waterlily type blooms; outstanding pale yellow color; great contrast against dark green foliage
	n	n	1	2	3	3	n			Just started to bloom in early September; nice upright two-toned blooms; lots of buds, but..
	n	n	2	4	4	2	sl	y	n	Big floppy flowers make attractive display in late season; needs deadheading
	n	n	2	2	2	2	sl	y	n	No blooms this summer
	n	n	4	4	4	4	sl	y	n	Abundant tiny blooms on very tall plants, nice display late in season; interesting pink stripes on back of petals
	n	n	4	4	4	4	n	y	y	All America Selections Winner 1975; named for reddish foliage color; big bushy plant covered with multi-colored blooms; dark foliage sets off the flowers; very attractive; dig tubers in fall
	n	n	3	3	3	3	sl	y	n	Outstanding abundant flowers on tall plant; great show through mid season to frost; miniature formal decorative bloom style
	n	n	4	4	4	4	y	y	n	Outstanding hot pink blooms; one of the tallest plants; great show in late season
	n	n	1	4	4	4	n	y	n	Large outward facing flowers, needs deadheading
	n	n	1	2	2	2	y	y	n	Formal decorative style; petals fold back toward stem
	n	n	4	3.5	3.5	3.5	y	y	y	Abundant cactus blooms on plants much taller than advertised; covered with blooms on upright stems; nice mix of colors
	n	n	1	4	4	4	sl	y	n	Huge balloon flowers of pure white; very attractive late in season; giant bush with lots of branches, few blooms; formal decorative bloom type; recurved petals give flower a ball shape
	n	n	1	1	3	3	y	y	n	No blooms ; very nice display on medium sized bush other years
	y	n	4	4	4	4	sl	y	y	Large balls of flowers on tall, upright stems; very colorful display especially with mix of flower colors in a single ball; needs deadheading late in season; very nice display; attracts butterflies
	y	y	4	4	4		sl	y	y	All America Selections winner 1992; compact plants covered with lacy flowers nearly all season; very attractive display of electric solid colors
	n	n	3	3	3	3	n	y	y	Mounds of brilliant color nearly all season; poor spread in this cold, rainy season; grew much better in other years; All America Selections winner 1974; very nice mix of colors
	y	y	4	4	4	4	sl	y	y	Excellent display all season; mounded plants covered with blooms; striking patterns of red and white with some pink; All America Selections winner 1978

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Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y															
			max	min	max	min	Jun				Jul				Aug				Sep			
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2		
Dianthus	Sweet Scarlet	scarlet	16.5	5.5	4.5	.5					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Diascia	Diamonte Apricot	peach	6.75	3	.75	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Dicranostigma**		yellow							☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Dusty Miller	New Look		14	7																		
European Meadow Rush	Blue Arrows																					
Fennel Flower	African Bride	white petals, maroon anthers													*	*	*	*	*	*	*	*
Feverfew	Crown White	white	20	10	.75	.5	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Flowering Flax**	Charmer Mixed	white, red, peach	23	11	.5	.25					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*
Gaillardia	Amber Wheels	yellow, brown centers								*												
Gaillardia	Razzledazzle Mixed Colors	deep red, gold tips	29	10	2.5	1			*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Gaillardia	Sundance Bicolor	red and orange bicolor	17	6	2.5	.5			*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Gazania	Kontiki® Stars & Stripes	mix: orange, rose, cream, red striped	11	5	3	1			*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*
Geranium*	Maverick Star	pink w/rose centers	18	17	4.5	2	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Gerbera*	Revolution® Vanilla	creamy yellow								*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Grass, Feather	Capriccio		31	15																		
Grass, Great Quaking		green	22.5	9	.75	.25														☼	☼	☼
Gypsophila	Gypsy	pink	6	.75	.125	.06	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	
Helenium	Goldfield	gold	20	4	1.25	.5			*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		1
Hibiscus	Luna™ Rose	deep rose pink	14	12	3.25	.75					*	*	*	*	*	*	*	*	*	*	*	*

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	y	y	4	4	4	4	sl	n	n	Large balls of scarlet on upright and some floppy stems; intense color; great display in hot summer; excellent cut flower
	y	y	1	1	1	1	n	y	n	Mounding, dense habit, can spread up to 18 inches when mature; excellent cover; jammed with blooms nearly all season
	n	n	1	1	1	1	n	n	n	Poor growth, few flowers, very ragged appearance; died out early; not at all showy; died early in 2008
	y				4	4	n	y	y	Outstanding addition to dusty millers grown for their foliage; larger leaves than others; fills in well and forms a great carpet for edging; superb show long after last frost
					4	4	n	n	n	Grown for its stiff, upright blue-green foliage, recommended for bedding and mixed containers; Foliage is thin, upright; needs room to spread out; not good at front of beds; use as a background
	y	y					sl	n	n	Direct seeded on June 6, 2008; flowers late as direct seed, but is much more ornamental; big bushy plants; do not grow as transplants
	n	n	3	3	3	3	y	n	n	Bushy, mounding plants covered with small white flowers; great filler or in mass plantings; variable height leads to ragged appearance late in season
	y	n	3	3	3	3	n	y	n	Tall, delicate stems topped with brilliant blooms; nice in mass plantings or as filler in borders
	n	n	1	1	1	1				Grew poorly, died out in late August
	n	n	2	2	2	2	n	y	y	Floppy stems; unkempt appearance; not a great display until very late in the season
	n	n	3	3	3	3	sl	y	y	All America Selections winner 2003; bushy, free flowering, masses of double bicolor blooms; not the most attractive display despite the masses of blooms
	n	n	2	2	2	2	y	n	n	Outstanding striped petals; filled in well and covered with bright blooms; very colorful display; closes up in evening
	n	n	3	3	3	3	sl	n	n	Nice bushy plants with plenty of bicolor pink flowers all summer; visitor favorite
	y	y					y	y	n	Poor display in ground beds; better in containers; plants and flowers are short and easily overgrown; outstanding flowers in containers but crowded out by other plants
	y	y			2	2	n	n	n	Fine-textured, wispy grass for bedding or mixed containers and hanging baskets; needs to be mass planted for best effect; lost in flower bed
	y	y	4	4	4	4	n	y	y	Interesting floppy flowers and seed heads; good in dried arrangements; good as medium sized background plant
	n	n	2	2	2	2	n	n	n	Tiny mounds of baby flowers fill in bed well with color nearly all season; some plants died in midsummer; All America Selections winner 1997
	n	n	3	3	3	3	sl	y	y	Bushy gold daisies; wiry upright stems; colorful display nearly all season
	y	n	4	4	4	4	n	n	n	Very poor growth in ground beds especially in cold, wet summer; never branched, stayed yellow-green all summer and had some flower buds only in mid September; better in containers

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			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Hollyhock	Indian Spring	pink, white, red	60	37	4	2					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Fanciful™ Mix Stardust	rose, orange, red	6	3.5	1.25	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Super Elfin XP Pink Deep	dark pink	6	2	2	.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Super Elfin XP Punch	cherry red	6	2	1.5	.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Super Elfin XP Red	red	5.5	2	2.5	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Super Elfin XP Star Cherry	cherry rose margin w/white center star	4.5	2	1.5	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Super Elfin XP Star Salmon	salmon edges w/white center star	5.5	2	2	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Impatiens, Garden	Super Elfin XP Violet	violet	4.5	1.5	2	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Impatiens, Garden	Balance Violet	violet pink	5.5	2	2.5	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Japanese Thistle	Beauty Rose	pink	40	20	1.75	.5									*	*	*	☼	☼	☼	☼
Jewels of Opar	Limon	rose pink	20	7	.06	.06			*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Juncus	Javelin	green	52	15																	
Koeleria	Blue Sprite																				
Laurentia	Avant Garde Pink Hybrid™	pale lavender pink	17	4	1.25	.75				*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Lupine	Giant King Mix	lavender, white	24	13	1.75x8	1.25x2.25	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Marigold, African	Crackerjack Mixed	orange, gold, yellow	23	8	3.75	1.5			*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Marigold, African	First Lady	orange, gold	16.5	9	3.5	1.75					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Marigold, African	Mumsy Gold	yellow	14	2	3.25	1						*	☼	☼	☼	☼	☼	☼	☼	☼	
Marigold, African	Orange Jubilee	orange						*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Marigold, African	Simba	orange	21	8.5	4.5	1.75			*	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	4	4	4	4	sl	y	n	Very tall spikes with attractive blooms; a real crowd pleaser in the garden; huge blooms; excellent color mix in the garden; All America Selections winner 1939
	n	n	3	3	3	3	n	n	n	Only rose with white centers; no other color; stop blooming in late summer; poor show, very ragged appearance this season
	n	n	3	3	3	3	n	n	n	Huge blooms; clear color; very nice mounds of color; did not fill in well this season
	n	n	3	3	3	3	n	n	n	Medium sized blooms with rich clear color; did not fill in well this summer but flowers were still showy
	n	n	4	4	4	4	n	n	n	Large flowers with clear red color; most showy impatiens this season; needs deadheading late in season
	n	n	2	2	2	2	n	n	n	Poor growth this season; tiny plants, few flowers especially late in season
	n	n	3	3	3	3	n	n	n	Very ornamental star pattern on petals; medium sized blooms; poor growth this summer; did not spread or fill in beds
	n	n	3	3	3	3	n	n	n	Huge blooms, great clear color; poor spread this season
	n	n	4	4	4	4	n	n	n	Huge flowers, nice display early in season but did not fill in well
	y	n	3	3	3	3	y			Abundant thistle flowers on tall stems with sharply pointed leaves; very upright stems hold up well; great for background plant
	n	n	3	3	3	3	n	y	y	Chartreuse foliage; nondescript tiny flowers overwhelmed by neighboring plants; not showy in garden beds
	y				3	3	n	y	y	Tall, green background plant; winter interest with tall, stiff straw-colored stems; outstanding spiky branches; needs a lot of room to spread out
	n	n			4	4				Recommend for small mixed containers or as edging; small blue-green balls of foliage topped with wheat-like plumes; Ours never bloomed but mounds of spiky foliage are ornamental; great for front edges of borders
	y	n	4	4	4	4	n	n	n	Bushy mounding plants covered with tiny stars and finely toothed leaves; excellent mounding cover for middle of beds and containers
	y	y	3	4	4	3.5	n	y	n	Tiny spikes of flowers, not the best lupine for gardens; floppy, show is nice but not outstanding like Russell Hybrids; All America Selections winner 1933
	n	n	2	2	2	2	y	y	y	Big, rounded flower heads with frilly petals; very showy and bright; some deadheading needed late in season; more open habit than other African marigolds
	n	n	4	4	4	4	y	y	y	Nice small, creamy yellow blooms with brighter yellow center; bushy, fills in well; needs deadheading; died out in early September
	n	n	4	4	4	4	y	n	n	Looks like a miniature football mum; gorgeous blooms with recurved petals; holds up well in cold, rainy weather; some deadheading needed
	n	n					n	y	y	Very nice tall marigold with large ball flowers; needs lots of deadheading; All America Selections winner 1968
	n	n	4	4	4	4	y	y	y	Looks like small football mums with incurved wrinkled petals; not as floriferous as other marigolds but unique blooms

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Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y															
			max	min	max	min	Jun				Jul				Aug				Sep			
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2		
Marigold, African	Vanilla	cream	16	9	3.5	1				*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Marigold, French	Colossus	gold w/ mahogany markings	12.5	6	3	1.25	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*
Marigold, French	Golden Guardian	orange-yellow	33	4	1.75	1	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Marigold, French	Naughty Marietta	gold w/ mahogany blotch	18	10	2.5	1.25			⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Marigold, French**	Petite Harmony	gold and mahogany	8	2.5	1.75	.75	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Marigold, French	Queen Sophia	orange w/ mahogany markings	9	4	2.5	1.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*						
Mexican Sunflower**	Goldfinger	orange, yellow- orange centers	34.5	15	3.25	1					⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Mexican Sunflower	Torch	orange, light orange centers	43.5	15	3	1.25					*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Mexican Sunflower	Morning Sun	yellow w/orange markings	61	22.5	5	2					*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	
Morning Glory**	Grandpa Ott's	purple	85	40	2	.5			⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	*
Morning Glory**	Milky Way	white w/purple stripes	97	40	2.25	.75			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Mosquito Flower	Pretty Rose	rosy pink	19	9	2x2.5	1.25x1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	Golden Gleam	gold	12	5	3	1.25			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	Indian Chief	orange	22	3	3	1					⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	King Theodore	orange	16	4	2.75	1.25			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	Night and Day	pale yellow, mahogany	21	2	2.5	1			*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	Scarlet Gleam	orange	20	8	2.75	1			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	St. Clements	gold	16	5	2.25	.5			*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium**	Whirlybird Mahogany	burnt orange w/ yellow centers	13	4	3	1			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Nasturtium, Dwarf**	Ladybird	gold w/ mahogany markings	11.2	4	2.75	1.25			*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗

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

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall	Fragrance	Cutting	Drying	
	foliage	flowers	quantity	quality						
	n	n	4	4	3	4	y	y	y	Replacement for Sweet Cream; fully double heads; supposed to avoid turning brown longer than Sweet Cream; needs deadheading late in season
	y	y	3	3	3	3	n	n	n	Short mounding plant covered with huge blooms; uneven flower height leads to ragged display, but flowers are gorgeous
			3	2	2	2.5				Big, bushy, floppy plant; needs lots of space to spread and flop; covered with small light orange blooms all season
	n	n	4	4	4	4	sl	y	y	All America Selections winner 1947; billowy mounds of single-petaled flowers with striking deep mahogany pattern in the centers of the blooms; needs lots of room to expand; one of the best medium height marigolds
	n	n	3	3	3	3	sl	n	n	Mounding bushy plant for front of beds; very attractive bicolor flowers; top petals are gold, bottoms are mahogany; needs deadheading
	n	n	2	2	2	2	y	y	y	Superb rich display of deep orange colors, outstanding markings; short mounding plants covered with blooms nearly all summer; All America Selections winner 1979
			2	2	2	2	n			Attractive brilliant blooms on hairy stems and leaves; big bushy plants covered with blooms
	n	n	3	4	4	4	sl	y	n	Gorgeous velvety rich flowers; tall, floppy stems need ample room to spread; bushy, open growth; All America Selections winner 1951
			3	3	3	3	n	n	n	Very short tiny flowers; very different from other tithonias; died out early; did not do well in cold, rainy summer
	n	n	4	4	4	4	sl	n	n	Not as vigorous as Milky Way morning glory; very attractive blooms, spotty foliage
	n	n	4	4	4	4	n	n	n	Vigorous, thick vine covered with blooms; very attractive display all summer; grew rapidly and covered the trellis by mid summer
	n	n	3	3	3	3	n	n	n	Bushy plants covered with tiny pink blooms all summer; name mosquito might have something to do with the tiny size and shape of the flowers; excellent accent plant; very productive; no maintenance
	n	n	3	3	3	3	y	y	n	Large blooms; excellent show; light green foliage; fills in well
	n	n	4	4	4	4	y	n	n	Gorgeous dark green foliage and brilliant orange blooms
	n	n	3	2	2	3	y	n	n	Dark red-orange blooms and dark green foliage; fills in well with lots of blooms above the foliage
	n	n	3	3	3	3	y	n	n	Mix of yellow and mahogany-flowered plants, mostly yellow; yellows are more vigorous
	n	n	3	3	3	4	y	y	n	Huge flowers, excellent spread; very nice show of flowers above the foliage
	n	n	3	3	3	3	n	y	n	Mostly double flowers; yellowish foliage; not many blooms; appears sick late in the season
	n	n	4	4	4	4	y	n	n	Spurless bloom; huge flowers; very attractive color contrasts well with foliage
	n	n	3	3	3	3	y	n	n	Small mounding plant covered with small blooms; very attractive markings

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Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y														
			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Nasturtium, Dwarf**	Princess of India	dark orange	12	3	2	.5				*	✿	✿	✿	✿	✿	✿	✿	*			
Nemesia	Poetry White	white w/yellow lip	18	2.5	2.25	.75	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Nicotiana	Aztec Sweet Scent	white	38	16	4.5x5	2.5x2.5	*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Nicotiana	Green Tears	green	84	20	26x6	4x1.25					*	*	*	✿	✿	✿	✿	✿	✿	✿	✿
Nicotiana	Perfect Mix	white, rose, pink	49.5	9	7x10.5	1.5x5.5			*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Nicotiana, Garden	Nicki Red	red	26	11	6x8	5x5			*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Nicotiana, Hybrid	Tinkerbelle	dusky rose/green	56.5	15	7x3	2x3			*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Nierembergia	Purple Robe	lavender	12	1.2	1.25	.5			*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Nierembergia	Robe Mixed	lavender, white	14.25	3	.5	.25			*	*	*	✿	✿	✿	✿	✿	✿	✿	✿		
Nierembergia	White Robe	white	12	2	1.125	.5	*	*	*	*	*	*	*	✿	✿	✿	✿	✿	✿	✿	*
Nolana	Sun Belle Mixed Colors	blue	11	1	.5	.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Osteospermum*	Asti White	white on top, lavender beneath, blue centers	16	13.5	2.5	1	*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Oxypetalum	Heavenborn	blue	14	8	2.5	.5				*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	*
Pansy	Atlas Needlepoint Mix	lavender, cream, yellow w/yellow or purple face	11.5	4.5	2.25	.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Fizzy Lemonberry	yellow w/purple face	14.5	5	2.25	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Flambe Terracotta Shades	Rose, yellow, cream, peach	13.5	4	2.25	1.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Flirty Skirts Burgundy	burgundy, purple, lavender	13	5	1.75	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	1	1	1	1	y	y	n	Tiny foliage, smaller mounded plants than other nasturtiums; abundant flowers, showy; needs closer spacing to fill in well
	y	y	3	3	3	3	n	n	n	Bushy plants covered with tiny white blooms; excellent for garden borders and mixed containers; attractive display in mass plantings nearly all season; some die out in mid August
	n	n	3	3	3	3	y	n	n	Outstanding, large-flowered clear white, trumpet shaped blooms; flowers are fragrant up close
	n	n	4	4	4	4	y	n	n	Tall, upright, bushy plant with green blooms; not very showy but okay as background plant where a big filler is needed; smells bad
	n	n	3	3	3	3	y	y	n	Bushy plant with floppy stems, needs room to spread; great show through most of season; old flowers are ugly; needs significant deadheading
	n	n	4	4	4	4	y	y	n	Outstanding solid mass of color nearly all season; amazing display of same-height blooms; no maintenance required; a visitor favorite; All America Selections winner 1979
	n	n	4	4	4	4	sl	y	n	Tiny clusters of trumpet-shaped flowers with green outer petals and rosy pink insides and bright blue stamens; very unusual color combination; loaded with blooms on tall, airy stalks; visitors either liked them very much or hated them; attracts bees
	n	n	2	2	2	2	n	n	n	Short bushy flowers covered with blooms nearly all summer; a bit sparse late in season; fills in well and provides a great show for the edges of borders; a few dead plants in mid August; All America Selections winner 1942
	n	n	2	2	2	2	sl	n	n	Small mounds loaded with blooms for most of the summer; some plants dry up in mid August; excellent edging for front of borders
	y	y	2	2	2	2	n	n	n	Compact bushy plants choked with blooms; very ornamental display early in season but needs deadheading to maintain blooms; some plants dried up in late season
	y	y	3	3	3	3	n	n	n	Attractive blue flowers made a great ground cover this season; looks like morning glories on top of thick, fuzzy leaves
	y	n	4	4	4	4	n	y	y	The first white color single flower color osteospermum from seed; thick fleshy foliage; All America Selections Bedding Plant Award Winner 2008; very attractive blooms nearly all summer; visitor favorite
	y	y	3	4	4	3.5	y			Tiny star shaped flowers on upright spikes; nice true blue flowers, fuzzy leaves and interesting milkweed-shaped seed pods; needs mass planting to show off the tiny flowers
	y	y	2	2	2	2	sl	n	n	Outstanding mix of lightly ruffled petals with two- and three-toned flowers, many edged in dark lavender; great mounds held up well all summer
	y	y	4	4	4	4	n	n	n	Small blooms with ruffled edges; very ornamental purple faces with purple markings; jammed with flowers all summer; no maintenance
	y	y	2	2	2	2	y	n	n	Nice mounding plants loaded with blooms all summer; fills in well; slightly ruffled blooms; great color mix
	y	n	4	4	4	4	sl	n	n	Excellent, abundant small flowers with ruffled edges; beautiful range of purples from lavender to deep velvety burgundy; very attractive

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			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Pansy	Fraidy Cat	light blue and black	12	2	2.75	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Frizzle Sizzle Blue	lavender w/deep purple face	11	4	2	1.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Frizzle Sizzle Formula Mix	yellow, rose, purple, cream w/ mahogany face	13.5	3	2	.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Frizzle Sizzle Yellow	yellow w/ mahogany face, lavender highlights	10	4	1.75	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Frosty Rain	lavender and cream	14.5	2	1.75	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Jolly Joker	orange w/deep purple wings	15.5	2.5	2.25	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Majestic Giants Mix	lavender, purple, red/yellow bicolor, rose, scarlet, white, yellow w/dark face	14.5	5	3	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Blue Frost	lavender or purple w/purple face	14.5	5	2.5	1.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Deep Blue Blotch	deep lavender	14.5	6	2.75	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Ocean	lavender w/deep purple face	13	5	3	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Red Blotch	deep red w/ mahogany face	15.5	4	2.5	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Rose	rose	12	4	2	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Rose Blotch	rose w/maroon face	4	1.5	2.5	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Rose Wing	rose, cream, yellow	12	4	2.5	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix White Blotch	white w/maroon face	10	7	2.75	1.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Matrix Yellow	clear yellow and orange-yellow bicolor	13	4	2.75	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	y	y	3	3	3	3	y	y	y	Nice individual plants but color mix is very unattractive; too much contrast between nearly black and light colors; appearance in mix is blotchy
	y	y	4	4	4	4	y	y	y	Ruffled petals; very ornamental mounds with shades of lavender and deep purple; rich colors; medium sized flowers but lots of them; fills in well and holds up all season
	y	y	4	4	4	4	sl	y	y	Ruffled petals; small plants don't fill in as well as other pansies; need closer spacing; nice mix of colors.
	y	y	2	2	2	2	n	y	y	Old fashioned ruffled petals; fills in well, better than Chalon Mix; needs deadheading late in season; small flower size
	y	y	4	4	4	4	n	y	y	Outstanding mounds of solid cream and cream/lavender bicolors; excellent blooms all summer; mounds grow all summer and overrun neighbors
	y	y	3	3	3	3	y	y	y	Nice mounding plant covered with blooms; variation in flower color from pale orange to deep orange with purple highlights; All America Selections winner 1990
	y	y	3	3	3	3	n	y	y	All America Selections winner 1966; large flowers with contrasting dark face; very attractive display all season; needs some deadheading late in the season
	y	y	2	2	2	2	n	y	y	Advertised as cream with lavender face but most flowers lavender and purple with purple face; nice large flowers; abundant blooms; little maintenance
	y	y	3	3	3	3	sl	y	y	Tiny flowers but abundant; attractive solid color on mounding plants; excellent display all season; needs some deadheading
	y	y	4	4	4	4	sl	y	y	Advertised as all lavender but had several cream flowers with purple face; nice sized blooms cover the plants well; very attractive; needs deadheading
	y	y	4	4	4	4	sl	y	y	Very nice, uniform color; rich, dark blooms cover the small mounding plants; needs close spacing for best results
	y	y	4	4	4	4	sl	n	n	Outstanding clear rose blooms with slightly different shades in each plant; brilliant yellow centers are great accent; bushy plants bloom reliably all summer
	y	y	2	2	2	2	n	y	y	Outstanding bicolor combination of light and dark velvety rose; Abundant blooms this season lasted well in to fall
	y	y	2	2	2	2	sl	n	n	Large flowers in mix of cream, rose or yellow with deep rose face; ragged appearance late in season; not as bushy as some pansies
	y	y	2	2	2	2	n	y	y	Short, upright plant covered with beautiful white blooms; very attractive mounds of color all season
	y	y	3	3	3	3	n	y	y	Huge, brilliant clear colors; fills in well; covered with flowers all season, huge mounds of color

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			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Pansy	Panola® Rose Picotee	rose, yellow, burnt orange w/rose or mahogany face	13	4	2	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Antique Shades	rose, yellow bicolors w/purple face	14.5	6	2	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Beaconsfield	cream and deep bluish purple	11.5	2.5	2.75	.75	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Blue/Blotch	deep lavender w/purple face	17	2.75	2.75	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Deep Orange	orange	14.5	4	2.25	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Lemon Splash	yellow w/orange-yellow face	12	3	2.75	.75	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Marina	lavender w/white-edged deep purple face	16	3	2	.75	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Primrose/Blotch	yellow w/mahogany face	17	3	2.75	1.25	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Pure Lilac Shades	lavender w/dark lavender face	16	3	3	.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Pure Silver Azure	clear lavender	14	4	2.75	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Pure Yellow	yellow or gold w/mahogany face	11	1	2.25	.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Red/Blotch	dark red w/mahogany face, yellow center	7	2	2.25	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Rose Shades	rose w/maroon face	16	4	3.5	.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® True Blue	bluish lavender	13	5	2.75	.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® White/Blotch	white w/purple face	11.5	3	2.5	.75	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Yellow Blotch	yellow, mahogany face	15	2	2.5	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pansy	Promise® Yellow Blotch	yellow, mahogany face	14.5	2	2.5	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿

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x: If flower size was uniform, size is recorded under max only; sizes with an x (ex.: 12x3) indicates a spike flower type with the height x width. ** = plants grown in raised beds.

y: ✿ indicates just starting to bloom, ✿ indicates 50% bloom, and ✿ indicates full bloom.

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	y	y	3	3	3	3	n	y	y	Short, bushy growth covered with blooms all summer; attractive display and no maintenance needed; some blooms with a lot of orange rather than rose, not attractive mix
	y	y	2	2	2	2	sl	y	y	Ragged appearance; needs a lot of deadheading for best results; different colors have different heights leading to ragged appearance
	y	y	4	4	4	4	y	y	y	Interesting bicolor flowers with cream on top and deep bluish purple on bottom; lots of scarring on petals from cold, wet weather
	y	y	2	2	2	2	y	y	y	Very nice contrasting shades of purple with deep purple face; abundant mounding plants; excellent color all season
	y	y	3	3	3	3	sl	y	y	Very nice solid color pansy with mounds of color nearly all season; needs deadheading for best results; not the biggest orange-flowered pansy, but does well in containers
	y	y	3	3	3	3	sl	y	y	Mostly pale yellow but some plants brilliant gold; nice carpet of flowers nearly all summer; needs deadheading in late summer
	y	y	2	2	2	2	n	y	y	Very nice compact growth that fills in the bed early; flowers are ragged; ugly in cool wet weather; needs more deadheading than other pansies
	y	y	3	3	3	3	sl	y	y	Very nice yellow color; uniform plants; not as floriferous as other pansies; excellent contrasting colors; mounds of color all season
	y	y	4	4	4	4	n	y	y	Beautiful assortment of lavender shades; large and abundant flowers; very attractive overall display; beautiful purple whiskers on most flowers
	y	y	3	3	3	3	sl	y	y	Large flowers, may be hardy in some areas; outstanding mounds of flowers with solid single color; very ornamental
	y	y	2	2	2	2	n	y	y	Great mounds of color nearly all season; brilliant yellow contrasts well with dark centers; fills in well; very little maintenance needed
	y	y	1	1	1	1	n	y	y	Rich red velvety color; small plants need closer spacing to fill in well; very nice uniform color and size of plants
	y	y	3	3	3	3	y	y	y	Excellent contrasting color; fills in well; very ornamental; no deadheading needed
	y	y	3	3	3	3	n	y	y	Uniform large blooms with the bluest color of all the mixes; abundant blooms; fills in well; lots of deadheading needed late in season
	y	y	3	2	3	3	y	y	y	Excellent blooms in bushy mounds all summer; beautiful white blooms with contrasting purple faces; some deadheading needed
	y	y	3	2.5	2	2	n	y	y	Very nice clear face with striking mahogany face; brilliant show with mounds of flowers; best of the yellow/face pansies this year
	y	y	3	3	3	3	n	y	y	Very nice clear face with striking mahogany face; brilliant show with mounds of flowers; best of the yellow/face pansies this year

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Table 3. Results of tested annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y													
			max	min	max	min	Jun				Jul				Aug				Sep	
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2
Pansy	Promise® Yellow/ Purple Wing	yellow w/ mahogany wing and face	12	2	2.25	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Promise® Yellow/ Red Wing	yellow w/ mahogany wings and face	13	3	2.75	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	Whiskers Light Blue	pale lavender, cream face w/ dark "whiskers"	12	3	2.5	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pansy	XXL Golden Yellow	yellow w/gold highlights	15	5	2.75	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Penstemon	Esprit Mix	pink, rose, red w/ white throats	28	7	3x9	3x4	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Penstemon	True Blue	blue																		
Pepper, Ornamental	Black Pearl	black foliage and fruit	15	13	0.06	0.06										☼	☼	☼	☼	☼
Pepper, Ornamental	Calico	purple/lavender bicolor	13	9	0	0							☼	☼	☼	☼	☼	☼	☼	☼
Pepper, Ornamental	Chilly Chili	white	9.5	8.5	1.5	1			☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pepper, Ornamental	Garda Tricolore	cream, orange, red fruit	15	9					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Pepper, Ornamental	Peppa Blanca/ Rosu	cream, rose fruit	6.5	4.5					☼	☼	☼	☼	☼	☼	☼	☼	☼			
Pepper, Ornamental	Peppa Lila/ Naranja	white	8.5	6	1	.5			☼	☼	☼	☼	☼	☼	☼	☼	☼			
Pepper, Ornamental	Peppa Orangina	orange fruit	11	4					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Pepper, Ornamental	Purple Flash	lavender	10	4.5	0	0					☼	☼	☼	☼	☼	☼				
Petunia*	Alderman	purple	14	4.5	2	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia*	Baby Duck Yellow	soft yellow	14	7	2	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia	Baby Duck Yellow	soft yellow					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼			
Petunia	Carpet Pink Improved	pink					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼			
Petunia*	Carpet Pink Morn	pink w/creamy throat	10	6	2.5	1.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	y	y	2	2	2	2	n	y	y	Unusual combination of colors was either liked or hated by visitors; hard to combine with other flowers
	y	y	4	3	3	3	sl	y	y	Bright yellow contrasts well with mahogany face; fills in well and covered with blooms; interesting mahogany highlights
	y	y	3	3	3	3	sl	y	y	Beautiful flowers appear to be painted with dark whiskers; nice mounding plant; very attractive blooms; needs deadheading late in season
	y	y	3	3	3	3	y	y	y	Medium sized mounding plants covered with solid color blooms; very attractive; needs deadheading in late season especially in wet weather; petals prone to spotting and discoloration
	y	n	2.5	3	3	3	sl	y	n	Outstanding spikes of large, showy flowers; similar display to foxgloves but shorter; excellent mix of colors; best display from mid season onward
										Died at planting
	n	n	2	2	3	2	n	n	y	Nearly black purplish leaves, very few small, shiny black peppers this season; ripe fruits are red; very ornamental, great in raised beds and in the garden; bushy, fills in well
	n	n	2	2	2	2	n	n	n	Very ornamental two-toned blooms in giant mounds covering the plant all season; top petals are purple, bottom are lavender
	n	n	1	1	1	1	n	n	fruit	Medium sized bushy plants with green leaves and very few pointed yellow fruit this year; better in containers
	y	n	1	1	1	1	n	y	n	Bloomed in late August; no fruit; bushy but not ornamental
	n	n	1	1	1	1	n	n	y	Poor growth this season in ground beds; lots of dead plants
	n	n	1	1	1	1	n	n	fruit	Poor growth this season; did not fill in well; very few flowers and fruit
	n	n	2	2	2	2	n	n	fruit	Upright tree-like plant covered with tiny blooms and round berry-like fruit; fruit did not ripen this season, and flowering was very late; no ornamental appeal this season
	n	n	1	1	1	1	n	n	n	Deep purple foliage; not as bushy or ornamental as Black Pearl; no fruit this summer; many dead plants by late summer
	n	n	4	4	4	4	y	n	n	Beautiful velvety blooms, but sparse and leggy in containers; nice contrast to pink petunias
	y	n	3	3	3	3	y	n	n	Small, trumpet-shaped blooms; slightly upright spreading habit; excellent filler for containers with mounds of blooms all summer
	y	n	1	1	1	1	y	n	n	Small, trumpet-shaped blooms; slightly upright spreading habit; killed by mid August by Sclerotinia
	y	n	1	1	1	1	y	n	n	Compact shape; mid-sized blooms; excellent branching; severe Sclerotinia rot in mid August
	y	n	2	2	2	2	y	n	n	Large flowers, bushy plant, grows well in containers; attractive bi-color flowers

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Table 3. Results of tested annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y														
			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Petunia*	Dreams Fuchsia	hot pink w/yellow throat	19.5	4	2.25	1.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia	Dreams Rose Morn	rose w/white centers and yellow throat					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia*	Easy Wave® Mix Pink Marble	pink	15.5	6	5	1.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia	Easy Wave™ Coral Reef	salmon pink					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia*	Fantasy Pink Morn	pink w/ cream center	17	12	3.75	2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia*	Lambada Salmon Veined F1 Hybrid	salmon pink, dark pink veins	13	9	3	2.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia	Lambada Salmon Veined F1 Hybrid	salmon pink, dark pink veins					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia	Madness Plum Crazy Improved	light purple, dark purple throat					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia*	Madness Red Improved	deep red	21	8	3	2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Madness Red Improved	deep red					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia*	Madness Red Picotee	deep red w/ white edges	14	10	3	2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia*	Madness Yellow	creamy yellow	12	9	2.5	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Madness Yellow	creamy yellow					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼		
Petunia	Madness Yellow	creamy yellow	16	6.5	2.25	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Opera Supreme Pink Morn	pink w/cream throat	16	9	2	1.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Prism Sunshine	light yellow	17.5	12	2.5	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Prism Sunshine	light yellow					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Shock Wave Ivory	cream w/soft yellow throat	12	7.75	2.25	1.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Shock Wave Ivory	cream w/soft yellow throat					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Petunia	Shock Wave Pink Vein	light pink w/violet rose throat and veins	9.5	4	2.75	1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall	Fragrance	Cutting	Drying	
	foliage	flowers	quantity	quality						
			4	4	4	4	y	n	n	Very large blooms in containers; showy display all summer; fills in well and complements other container plants
	y	n	1	1	1	1		n	n	Tightly branched, free-flowering; very nice bicolor early in season, killed by Sclerotinia in mid August
			4	4	4	4	y	n	n	Small flowers but abundant; forms mounds of color that work well with other container plants; nice two-toned colors
	y	y	1	1	1	1	sl	n	n	Solid coral color with lighter pink throat; fair growth in containers; not as full and floriferous as other petunias, ragged appearance late in the season; needs deadheading
	y	n	4	3	3	3	y	n	n	Out competed by other petunias and geraniums; not vigorous or showy
			2	2	3	3	y	n	n	Better in containers than in ground beds, but not the most floriferous; other peonies fill containers better
			1	1	1	1				Interesting two-toned blooms with attractive dark veins and throat
			1	1	1	1				Outstanding flower color with light purple edges and deep purple throat; susceptible to Sclerotinia rot late in the season
	y	n	2	3	2	2	sl	n	n	Nice deep red, rich color; great show early, but died in mid August by Sclerotinia
	y	n	1	1	1	1	sl	n	n	Nice deep red, rich color; great show early, but died in mid August by Sclerotinia
	y	n	3	3	2	3	sl	n	n	Very attractive white-edged blooms wit clear red throat; fills in well in containers; attractive display
	n	n	4	4	4	4	y			Nice two toned yellow flowers but overwhelmed by wave petunias; very attractive blooms
			1	1	1	1				Beautiful creamy yellow blooms fill in well in containers; nice complement to other container plants
			4	3	3	3	y	n	n	Nice light color; blooms well in beginning of season but declines slowly with Sclerotinia rot;
	y	y	3	2	2	2	y	n	n	Low-growing carpet that spreads and fills in nicely with medium sized trumpet flowers; dead in late July from Sclerotinia rot
	y	y	4	4	4	4	y	n	n	Some creamy yellow blooms early in season but overwhelmed by other container plants; not much of a show this season; All America Selections winner 1998
	y	y	1	1	1	1	y	n	n	Excellent display of creamy yellow blooms; huge flowers; All America Selections winner 1998
	n	n	4	4	4	4	y	n	n	Mounded spreading plants; tiny flowers; nice mounding filler for containers
	n	n	1	1	1	1	y	n	n	Mounded spreading plants; tiny flowers; nice complement to other larger-flowered petunias
	y	n	3	3	3	3	sl	n	n	Recommended for containers; mounded spreading plants; small flowered plants; killed by Sclerotinia in mid August

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							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Petunia	Shock Wave Pink Vein	light pink w/violet rose throat and veins					✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Petunia	Shock Wave Purple	deep pink	12	4	2.25	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Petunia	Shock Wave Rose	rose w/white throat	17.5	4	2	1	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Phlox, Annual	Promise® Scarlet	scarlet								✿	✿	✿	✿	✿	✿	✿	✿				
Plume Thistle	Pink & Rose Beauty	white, rose, pink	51	26	1.25	.5									✿	✿	✿	✿	✿	✿	✿
Portulaca	Margarita Coral	light orange	4	1	.75	.25			✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Pumpkin on a Stick**			21	13																	
Rudbeckia	Goldsturm	yellow w/ chocolate centers																			
Salvia, Scarlet	Red Hot Sally II	red	9.5	4	3.5x4.5	1x2	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Salvia, Scarlet	Saluti Deep Red	red					✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Saluti Formula Mix	red, salmon	18	7.5	4.5x3.75	2.5x2	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Saluti Lilac	lavender	7	5	3.5x5	.5x2.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Salvia, Scarlet	Saluti Red	scarlet					✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Saluti Salmon/Pink	salmon pink					✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Saluti Salmon/Pink	salmon pink	14	7	2.5x3.5	1x1.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Saluti Scarlet/White	red and white bicolor	8	4	3.5x3.5	.5x2	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Saluti White	white	7	4	1.75x1	1x.75	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Salvia, Scarlet	Vista Rose	rose	9	4.5	2.5x3.5	.5x1.5	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿
Scarlet Runner Bean**	Painted Lady	scarlet and white bicolor	82	40	2.75x2.25	1x1								✿	✿	✿	✿	✿	✿	✿	✿

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 x: If flower size was uniform, size is recorded under max only; sizes with an x (ex.: 12x3) indicates a spike flower type with the height x width. ** = plants grown in raised beds.
 y: ✿ indicates just starting to bloom, ✿ indicates 50% bloom, and ✿ indicates full bloom.

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	y	n	1	1	1	1	sl	n	n	Very nice two-toned flowers; fills in well in containers; small, abundant flowers
	n	n	4	4	4	4	n	n	n	Recommended for containers; mounded spreading plants; small flowered; fills in containers well
	y	n	4	4	4	4	y	n	n	Recommended for containers; mounded spreading plants; small flowered; outstanding clear rose color
	y	n	1	1	1	1	n	y	n	Double and semi-double flowers; loaded with blooms; fills in well; great carpet for the front of borders; needs some deadheading late in season; died early in 2008
	y	y	4	4	4	4	n	n	n	Very tall thistle flowers on spiky stems; very upright growth habit; nice mix of colors; great background plant
	n	n	1	1	1	1	n	n	n	Tiny bunches of flowers, spread poorly in cold season; some blooms by late season, but not a good show this year
	n	n			3	3	n	n	n	Thorny purple shoots with yellow-green foliage; no blooms all summer
	n	n	1	1	1	1	n	y	y	Bloomed in 2006 but not in 2007, the hotter season; grew poorly in 2008 and did not bloom
	n	n	2	2	2	2	n	y	n	Original in this series introduced 25 yrs ago, a garden favorite; mounding plant; dark green foliage and striking red spikes; some die out by mid August; deadheading required to maintain ornamental appeal
	n	n	1	1	1	1	n	y	n	Rich red color, very attractive early; needs deadheading in late season; died early in 2008
	n	n	1	2	2	2	n	n	n	Only red, salmon colors this year; others died early; one big bushy plant, all others dead
	n	n	1	1	1	1	n	y	n	Very nice spikes of lavender color; held up well but died out in early September; needs deadheading
	n	n	1	1	1	1	n	y	n	Tall spikes of brilliant color; not as good as Red Hot Mama this season; some deadheading needed; branches well and fills in with color; died early in 2008
	n	n	1	1	1	1	n	n	n	Bushy plants, good color all season; interesting two-toned blooms; died out by early September
	n	n	1	1	1	1	n	n	n	Bushy plants, good color all season; interesting two-toned blooms; needs deadheading late in season
	n	n	1	1	1	1	n	n	n	Small flowers, not as showy as other salvias; yellow spotted foliage
	n	n	1	1	1	1	sl	n	n	Medium sized spikes produce an okay show through mid season; flowers turn brown; significant deadheading needed; by season's end, lots of plants died out, others look ragged
	n	n	1	1	1	1	sl	n	n	Not as floriferous as other salvias; needs close spacing; nice deep rose color; needs deadheading in mid season
	n	n	4	4	4	4	y	y	n	Very attractive blooms with beautiful contrasting color; great alternative to scarlet runner beans; few beans this season

z: 0=dead; 1=poor, dead, 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 annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y															
			max	min	max	min	Jun				Jul				Aug				Sep			
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2		
Scarlet Runner Bean**	Scarlet Emperor	scarlet	80	40	2.5x2.25	.25x1								*	☼	☼	☼	☼	☼	☼	☼	☼
Shasta Daisy	Snow Lady	white, yellow centers	13	4	3.5	2	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Slipper Flower		yellow	18	4	.5	.25	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Snapdragon	Costa Mix	burgundy, rose, light pink, lavender, white	23	13	3.5x9	2.5x2	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Snapdragon	Rocket Rose	light rose	26	11	7.5x3.5	3x1.5			☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Snapdragon	Snapshot Rose	rose					*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	*				
Snapdragon	Snapshot White	white w/yellow throat	12	4.25	4x2	2.25x1.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	☼	☼			
Snapdragon	Snapshot Yellow	yellow	10	3	2x6	1.25x2	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*	*	*			
Snapdragon	Speedy Sonnet Rose	rose	20	11	3x6	1.5x2.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Snapdragon	Speedy Sonnet White	white	23	9	2.5x9	1.5x3	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Snapdragon	Spring Giant Mixture	pink, red, orange, yellow, white	32.5	11	9x3.5	2.5x1	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Snapdragon	Chantilly Deep Orange	dark orange	22	12	6x3	4.25x2.5	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	
Snow-on-the-Mountain		white																				
Spanish Lavender	Fragrant Butterflies	violet/lavender, purple	20.5	9	0	0								☼	☼	*			*	*		
Statice	QIS Mixture	pink, white, lavender, yellow	38	19	2.5x2	1.5x1.25					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Stock	Sugar & Spice Mix	maroon, white, pink, lavender	14	1.5	1.75	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Sunflower**	Double Quick Orange F1 Hybrid	yellow	64	52	8	5							*	☼	☼	☼	☼	☼	☼	☼	☼	
Sunflower**	Key Lime Pie	creamy yellow w/green centers	52	33	3.5	1					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Sunflower**	Mongolian Giant	yellow	89	72	14.5	8								☼	☼	☼	☼	☼	☼	☼	☼	

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x: If flower size was uniform, size is recorded under max only; sizes with an x (ex.: 12x3) indicates a spike flower type with the height x width. ** = plants grown in raised beds.

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

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	4	4	4	4	y	y	n	Robust vine, huge beans; excellent climber and fills in well; thick, bushy vines with abundant scarlet blooms
	y	n	2	3	3	3	n	y	y	Nice compact shasta daisy; blooms well not as showy as traditional shastas but great for a bit of white in front edgings; All America Selections winner 198888
	n	n	3	3	3	3	sl	y	n	Interesting, tiny "pocket books"; tall, bushy plants; flowers are not showy, but would be a great filler; needs deadheading late in season
	y	n	3	3	3	3	n	y	n	Strong stems for cutting; very nice color combination; rocket mixes are better
	n	y	4	4	4	4	n	y	n	Attractive tall straight spikes, excellent for cutting; great show all season; All America Selections winner 1960
	y	n	1	1	1	1	y	n	n	Does not fill in well; needs significant deadheading to bloom all season; not for cutting; died early in 2008
	y	y	2	2	1	1	n	n	n	Short snapdragon, does not fill in well; many died out by mid August; poor show this season; needs lots of deadheading
	y	y	3	1	1	2	n	y	n	Short snapdragon forms mats rather than spikes; needs deadheading to keep display all season
	y	n	2	2	2	2	y	y	n	Shorter than many snapdragons but not a true dwarf; bloomed early but finished early; nice light rose color; there are better ones for cutting
	y	y	2.5	2.5	2.5	2.5	n	y	n	Short stems; blooms early and is done early; few flowers; needs deadheading
	y	y	3	3	3	3	4	y		Very nice, stocky upright stems, excellent for cutting; great mix of colors; variable height with yellow flowers tallest
			1	1	1	1	y	n	n	Poor survival after transplanting; only two plants bloomed; flower spikes are medium sized and flowers are open faced; unusual shade of orange; cannot be recommended in cold summers
			1	1	1	1				Medium sized stems just began to show variegated white and green foliage in mid September; not showy in this cold season; died early in 2008
	n	n	1	1	1	1	y	y	y	Tiny bushes, did not bloom; very poor growth in ground beds this season
	y	y	4	4	4	4	n	y	y	Bushy upright plants; excellent mix of colors; flowers just beginning to open in early September; mix is mostly pinks and whites, some lavender and yellow
	n	n	1	1	1	1	y	n	n	Tall stems, often floppy with clusters of very fragrant blooms. does not fill in so needs close spacing; best planted in mixed borders; some double, mostly single blooms; heavenly fragrance
	n	n	4	4	4	4	y			Medium sized heads on medium sized plants
	n	n	3	3	3	3	y	y	y	Small flowers in clusters; good cut flower; needs support in open beds; some lodging late in season; good show from midseason on
	n	n	4	4	4	4	sl			Not very giant this year; plants were short and head medium sized; killed by frost before seed set

Table 3. Results of tested annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y													
			max	min	max	min	Jun				Jul				Aug				Sep	
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2
Sunflower	Pro Cut Yellow Lite	yellow w/ greenish centers	47	25	6.5	2.75					*	☼	☼	☼	☼	☼	*		*	
Sunflower**	Solar Eclipse F1 Hybrid	gold/mahogany	63	37	7.5	3					*	☼	☼	☼	☼	☼	☼	☼	☼	☼
Sunflower**	Soraya	gold w/ brown centers	67	50	6	4					*	*	*	☼	☼	☼	☼	☼	☼	☼
Sunflower**	Sparky	dusky yellow	80	50	5.5	2						*	☼	☼	☼	☼	☼	☼	☼	☼
Sunflower**	Velvet Queen	mahogany, brown centers	61	48	8	3					*	*	☼	☼	☼	☼	☼	☼	☼	☼
Sunflower	Waooh	gold w/brown centers	36	21	6	4						*	*	☼	☼	☼	☼	☼	☼	☼
Sunflower	Zebulon	yellow, greenish yellow centers	35	24	6.5	5					*	☼	☼	☼	☼	☼	*			
Sunflower, Cucumber-leaf	Pan	gold, brown centers	42	24	11.5	4.5					*	*	☼	☼	☼	☼	*			
Sweet Pea**	Cuthbertson Floribunda Choice Mix	pink, red, white, lavender, purple, maroon	78	35	1.5	1									*	☼	☼	☼	☼	☼
Sweet Pea**	Lady Grisel Hamilton	lavender blue	73	21	1.75	.5									*	☼	☼	☼	☼	☼
Sweet Pea**	Old Spice Mix	lavender, pink, red, rose, maroon, white	73	31	1.25	.5							*	*	☼	☼	☼	☼	☼	☼
Sweet Pea**	Royal Mix	pink, red, rose, white, lavender, maroon	67	30	1.5	1									*	☼	☼	☼	☼	☼
Sweet Pea**	Spencer Ripple Formula Mix	purple/white bicolor, white, lavender, pink, rose	58	49	1.5	1						*	*	*	*	*	☼	☼	☼	☼
Swiss chard	Bright Lights		32	17																
Verbena, Garden	Quartz X P Purple	velvet purple	11	3	2.5	.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Verbena, Garden	Quartz X P Red Eye	red w/white eye	9.5	3.5	2.5	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Verbena, Garden	Quartz X P Scarlet	red w/white centers	8	2.5	2.5	1			*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Verbena, Garden	Quartz X P Silver	lavender-silver	12	2	2.25	1.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	n	n	3	3	3	3	n	y	n	Very early medium sized blooms on medium sized stems; excellent cut flower; multiple blooms from mid season onward; produces mature seed even in rainy summers
	n	n	4	4	4	4	n			Interesting flower pattern with gold petals and mahogany markings in the center; multiple blooms beginning in mid season
	n	n	3	3	3	3	y	y	n	Tall, multi-stemmed sunflower; straight stems excellent for cutting; All America Selections winner 2000
	n	n	3	3	3	3	sl			Thin petals mostly a dusky yellow; interesting pin-cushion-type centers; many blooms per stem but bloomed late
	n	n	2	2	2	2	n			Nice mahogany color of blooms, but few blooms all summer; not showy this season
	n	n	4	4	4	4	n	y	n	Excellent short sunflower blooms all summer, most short sunflowers finish blooming early and set seed, this cultivar blooms all summer; abundant blooms on each stalk
	y	y	2	2	2	2	n	y	n	Short stalky stems with medium sized heads, some of which mature seed by early September; hold up well although summer flower show is in mid season
	n	n	3	3	3	3	n	y	n	Buckets of small blooms; very bushy plant; needs room to spread; great cut flower
	y	y	2	4	4	4	y	y	n	Huge blooms; excellent fragrance; vigorous growth this season
	n	n	4	4	4	4	y	y	n	Vigorous vines covered with mostly lavender blue flowers; outstanding fragrance
	y	y	4	4	4	4	y	y	n	The best flowering sweet pea this year; excellent blooms at nose level; sturdy thick vines
	y	y	3	4	4	4	sl	y	n	The best fragrance of all sweet peas this year; not as floriferous as others; great growth
	y	y	4	4	4	4	y	y	n	Very attractive blooms some bicolors; tall, stocky vines; some flowers but late; not the most floriferous; fragrant; had fewest flowers of all sweet peas this year
	y	y			4	4	n	n	n	Outstanding colorful stems on this ornamental vegetable; looked great as green backdrop in flower garden; all America Selections winner 1998; gets tall and rangy when flower stalks emerge
	y	n	4	4	4	4	y	y	n	Attractive rich velvety purple color; great blooms all summer; holds up better than other verbenas; Fleuroselect Novelty Winner
	y	n	4	4	4	4	n	y	n	Clear red, rich color; abundant blooms all summer; very nice show
	y	y	4	4	4	4	n	n	n	Very attractive rich red blooms; not as floriferous as other verbenas; ragged appearance because of height difference among plants; needs deadheading for best show
	n	n	2.5	2.5	2.5	2.5	y	y	n	Uniform height, compact growth; not as floriferous as other cultivars; nice pale, pale lavender blooms

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Table 3. Results of tested annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y																
			max	min	max	min	Jun				Jul				Aug				Sep				
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2			
Verbena, Garden	Quartz X P White	white	8	3	.5	.125	*	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Verbena, Garden	Snowy River	white	17	2.5	0.25	0.25			*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Microla® Lavender	lavender w/ cream face and purple whiskers					⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Microla® Plum	purple w/light purple face	17	2	1.25	.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Microla® Pure Yellow	yellow	15	1	1.5	.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Rain Blue and Purple	lavender, light blue	15.5	6	1.25	.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® Experimental Pastel Blue Improved	lavender w/deep lavender face	15	7	1.5	1.25	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® Purple Improved	deep purple bicolor	15	7	1.5	.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® XL Blue-Yellow	yellow w/ lavender wings. purple whiskers	16	7	1.5	1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® XL Deep Blue-Blotch	purple w/deep purple face	18.5	3.5	1.5	1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® XL Plum-Gold	gold face w/ purple around the face and purple whiskers	15	3.5	1.5	.5	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® XL Purple Duet	purple/lavender bicolor shades, purple whiskers, yellow centers	14	5	1.5	1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® XL Red-Gold	maroon gold face, maroon lower petals	15	2	1.5	.75	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Skippy® Yellow/Purple Wing	yellow w/deep purple wings, purple whiskers	15	2	1.5	1	*	*	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Viola	Sorbet® Blue Babyface	deep lavender, purple eye	17	3	1.75	1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗

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x: If flower size was uniform, size is recorded under max only; sizes with an x (ex.: 12x3) indicates a spike flower type with the height x width. ** = plants grown in raised beds.

y: * indicates just starting to bloom, ⊗ indicates 50% bloom, and ⊕ indicates full bloom.

	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall	Fragrance	Cutting	Drying	
	foliage	flowers	quantity	quality						
	y	y	2	3	3	3	sl	y	n	Poor flower display when compared with other verbenas; spreads well, but few flowers; needs a lot of deadheading
	y	y	2	3	3	3	sl	y	n	Cousin to the lavender verbenas, 'Moon River'; tiny blooms, not very showy in mass plantings; best as filler with other larger specimen flowers
	Y	Y					sl	Y	Y	Poor growth; plenty of plants died this year
	y	y	3	3	3	3	sl	y	y	Tiny blooms, huge mounds; not as floriferous as other violas; some deadheading late in season
	y	y	3	3	3	3	y	y	y	Excellent clear yellow viola with maroon whiskers; nice accent flowers in containers; lots of blooms nearly all season
	y	y	4	4	4	4	sl	n	n	Thick mounds covered with blooms all summer; reliable blooms, no maintenance; some plants with all white blooms, some light lavender; excellent growth all summer
	y	y	4	4	4	4	y	y	y	Abundant blooms, excellent mounding display; great show all summer; no maintenance
	y	y	4	4	4	4	n	y	y	Mounds of velvety rich flowers in deep purple with slightly lighter purple centers; very ornamental all season
	y	y	3	3	3	3	y	y	y	Abundant blooms, great mounds of flowers; fills in well; deadheading unnecessary
	y	y	4	4	4	4	n	y	y	Rich velvety mounds of clear purple and contrasting yellow centers; brilliant color all summer
	y	y	4	4	4	4		y	y	Bred for winter bloom season in southern states; All America Selections Cool Season Bedding Plant Award Winner 2008; giant mounds of blooms all season; very nice display with bicolor flowers
	y	y	4	4	4	4	sl	y	y	Outstanding very uniform mounds of color; rich, velvety appearance in attractive bicolor; packed with blooms
	y	y	4	4	4	4	n	y	y	Nice mounds of color all season; fills in well; less maintenance than other violas; unusual color; best in mass plantings
	y	y	4	4	4	4	n	y	y	Very attractive bicolor flowers; huge mounds covered with blooms all summer; a visitor favorite
	y	y	4	4	4	4	n	y	y	Outstanding mounds of deep purple blooms with dark eye; fills in bed well and requires no maintenance; one of the best violas this year; visitor favorite

z: 0=dead; 1=poor, dead, 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 annual flower cultivars for 2008.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y														
			max	min	max	min	Jun				Jul				Aug				Sep		
							wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	wk 3	wk 4	wk 1	wk 2	
Viola	Sorbet® Peach Frost	orange, cream, peach, lavender	15	1	1.5	.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Viscaria	Ruby Flax	ruby	12	5	2	.75			☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Wallflower	Citrona Orange	orange	18	11	2.75x1.5	1x1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Wallflower	Citrona Yellow	gold	19	4.5	2.5x2	1x1	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼			
White Lace Flower		white					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼			
Zinnia, Garden	Canary Bird	yellow					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼				
Zinnia, Garden	Peggy's Delight	mostly orange shades from burnt orange to cream, pink, rose	30	14	4	3	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼				
Zinnia, Garden**	Polar Bear	creamy white	25.5	21	2.5	2.25	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼			
Zinnia, Garden	Profusion Knee High Red	dark orange red	22	5	2.25	1			☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Zinnia, Garden	Profusion Knee High White	creamy white, gold centers	16.5	11	2.12	1.25			☼	☼	☼	☼	☼	☼	☼	☼	☼		☼	☼	
Zinnia, Garden	Thumbelina Mix	red, orange, yellow, pink, scarlet w/yellow centers					☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Zinnia, Garden	Uproar	rose	22.5	9	4.25	2.5	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼			
Zinnia, Garden	Zahara Coral Rose	dark pink	13	4	2.5	1.0				☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Zinnia, Garden	Zahara Scarlet	scarlet	11	8	2.25	1.75				☼	☼	☼	☼	☼	☼	☼	☼				
Zinnia, Garden	Zahara White	white	12.5	7	2.5	1.25			☼	☼	☼	☼	☼	☼	☼	☼	☼		☼	☼	
Zinnia, Garden	Zahara Yellow	yellow	16	10	2.25	1			☼	☼	☼	☼	☼	☼	☼	☼	☼				
Zinnia, Mexican	Aztec Sunset	mahogany/ yellow bicolor, yellow, gold	23.25	11	1.25	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼
Zinnia, Mexican	Persian Carpet	bicolors in red, mahogany, gold, purple, cream	24	5	2.25	.75	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼

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x: If flower size was uniform, size is recorded under max only; sizes with an x (ex.: 12x3) indicates a spike flower type with the height x width. ** = plants grown in raised beds.

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	Frost tolerance		Plant ratings ^z				Recommended for			Comments
			Flower		Foliage	Overall				
	foliage	flowers	quantity	quality			Fragrance	Cutting	Drying	
	y	y	3	2.5	2.5	2.5	n	y	y	Flowers open as peach with dark orange center and creamy wings and mature to shades of cream and orange with lavender wings; huge mounds of color with blooms nearly all season; very attractive
	n	n	2	2	2	2	y			Very attractive ruby red blooms, grow as filler or in mass plantings
	n	n	3	3	3	3	sl	y	n	Great mounds of color nearly all season; very attractive in mass plantings; prominent seed heads in late season; some lodging; needs deadheading from planting onward
	n	n	3	3	3	3	y	y	n	Plants are in bloom in containers when planted; go to seed early if not deadheaded; try direct sowing or serious deadheading for best late season color
			1	1	1	1				Bloomed well especially at the beginning of the season; big bushy plants covered with tiny flowers
	n	n	1	1	1	1	n	n	n	A few stems survived and bloomed; poor show this season; died early in 2008
	n	n	2	2	2	2	n	n	y	Selected from Vietnamese germplasm by Seeds of Change; square-edged petals; colors are creamy, not brilliant like other zinnias; nice mix of colors; variable height; wide range of flower sizes
	n	n	1	1	1	1	sl			Small to medium blooms; plants did not branch well; attractive creamy white color
	n	n	4	4	4	4	n	y	y	Very attractive color; open floppy mounds covered with blooms; excellent show nearly all season; some disease late in season
	n	n	2	2	2	2	n	y	y	Bushy mounding plant covered with blooms; excellent display nearly all season; died out in early September because of Sclerotinia rot
	n	n	2	2	2	2	n	y	y	Miniature flowers on tall stalks; striking early summer display; abundant blooms all season; some deadheading needed by midseason; All America Selections winner 1963
	n	n	3	3	3	3	sl	y	y	Outstanding, tall solid-color zinnias; very floriferous, blooms hold up well all season; some deadheading late in season; some sclerotinia rot late in season
	n	n	4	4	4	4	n			Very nice clear dark pink color, plants are sparse fillers compared to others of its kind, susceptible to Sclerotinia cottony rot
	n	n	1	1	1	1	n	n	n	Short mounding plants covered with blooms early; died out because of Sclerotinia rot in late August
	n	n	2	2	2	2	n	n	n	Large blooms on small mounding plants; did not fill in well as other zinnias of this type; many plants died in late season from Sclerotinia rot
	n	n	2	2	2	2	sl	n	n	Nice small, creamy yellow blooms with brighter yellow center; bushy, fills in well; needs deadheading; died out in early September
	n	n	3	3	3	3	n	y	y	Tiny multicolored flowers bloom all season; great in mass plantings or as accents to larger zinnias; good cut flower
	n	n	3	3	3	3	n	y	y	All America Selections winner 1952; double and semi double blooms; small but abundant flowers in a variety of patterns; some disease in mix August

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Table 4. Results on cultivars completed three years testing

Name	Cultivar	Ave. ^z Overall Rating	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. ^x Min flower Size (in)	Ave. ^x Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
African Daisy**	African Moon	1	1	7.25	17.25	.87	1.75	1	1
Alyssum, Sweet	Rosie O'Day	2	2.3	2	5.3	.42	1.0	2.3	2.3
Alyssum, Sweet	Royal Carpet	3.3	3.3	2.3	11.3	.3	.8	3.3	3.7
Amaranth, Feathered	Icecream Banana	2.3	2	5.7	8	1.4x1.2	2.4x3.1	2.3	2.3
Amaranth, Feathered	Icecream Orange	2.3	2	4.8	9.8	1.6x0.9	3.75x1.9	2.7	2.3
Aster, Annual Garden	Ballet Mix	3.7	3.7	9.7	18.7	2.8	5.2	3.7	3.7
Bachelor's Button	Jubilee Gem	3.2	3.2	6.7	17.3	.7	1.3	3.5	2.7
Bishop's Flower	Graceland	2.3	2.3	10.7	22.5	1.5	3.8	2	2.3
Bisnaga	Casablanca	3.7	3.7	8.5	29.7	1.2	4	3.7	4
Calendula	Orange Zinger	3.3	3	12	31.4	1.7	3	3.3	3.3
Calendula	Triangle Flashback	3.3	3.3	11.7	27.5	.8	2.3	3.3	3.3
California Poppy	Summer Sorbet	3.3	3	4.8	17.2	.6	2.4	3.3	3.3
Celosia	Burgundy Supercrest	2.3	2.3	8.8	12.8	1.4x1.5	2.5x3.5	2.7	2
Celosia	Fireglow	2	2	3.9	6.8	0.8x1	1.8x1.25	2	2
Celosia	Fresh Look Gold	1.7	1.7	4.2	9.6	0.9x0.9	3.25x0.75	2	1.7
Clarkia	Chieftain	2.7	2.7	12.7	37.3	.8	1.5	3	2.7
Coreopsis	Sunfire	2.7	3	10.7	19.1	1	2.3	2.7	2.7
Cosmos	Dazzler	2.7	3.3	20.5	39.3	1.6	4.3	3	2.3
Dahlia	Bloomquist Dawn	3.7	3.7	23.7	42.3	3.8	6.5	3.7	3.7
Dahlia	Citron De Cap	2.8	2.8	45.3	53	4.25	5.6	2.8	2.8
Dahlia	Emory Paul	3	2.7	35	42.7	3.7	6.9	3	2.7
Dahlia	Jo	3.3	3.3	41.9	47.4	4	6.8	3.3	3.3
Dahlia	Mom's Special	1.7	2.3	39	40.3	5.5	9.13	2.3	1.7
Dahlia	Papageno	2.7	2.7	30.33	32	4.3	5.3	3	3
Dahlia	Pat Feary	3	3	51.25	58.9	3.2	5.4	3	3
Dahlia	Robert Too	3	3	41.58	51.6	2.3	4	3	3
Dahlia	Scarborough Brilliant	3.7	3.7	52.17	62.2	4.3	6.3	3.7	3.7
Dahlia	Spartacus	2.7	2.7	29.5	38.5	3.5	3.8	2.7	2.3
Dahlia	Star-Gazer	2.2	2.2	10.4	30.2	2.2	4.1	2.2	2.3
Dahlia	Sterling Silver	4	3.7	44.67	48	4.6	8.9	4	3
Dahlia	The Boss	3	3	18.17	3.8	4.8	3.1	2.3	2.3
Dianthus	Bouquet™ Rose Magic	3.7	3.7	9.2	20.5	1.3	3.4	4	3.7
Dianthus	Ideal Violet	2.3	3.7	3.3	13.3	.6	1.4	3.7	3.7

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Name	Cultivar	Ave. ^z Overall Rating	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. ^x Min flower Size (in)	Ave. ^x Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Dianthus	Magic Charms	3.3	3.3	6.5	10.3	1.4	2.1	3.3	3.3
Dianthus	Snowfire	3.3	3.3	3.8	12.6	1.2	2	3.3	3.3
Dianthus	Sweet Scarlet	2.7	3	7.4	18.7	.9	3.7	3	2.7
Diascia	Diamonte Apricot	2.3	2.3	6.7	10.9	.3	.7	2.3	2.7
Dusty Miller	New Look	4	4	5.3	13.7				
Gaillardia	Sundance Bicolor	2.7	2.7	9	21	.8	2.2	2.7	2.7
Gazania	Kontiki® Stars & Stripes	3	2.7	6	11.8	1.3	2.8	3	3
Geranium	Maverick Star	2.7	3.3	15.3	21.7	2	3.6	2.7	2.7
Gypsophila	Gypsy	3	2.7	1.3	5.8	.1	.3	3	3
Hollyhock	Indian Spring	3.3	3.7	31.3	63.3	2	4.1	3.3	3.3
Lupine	Giant King Mix	2.5	2.7	14	25.2	2.0x1.9	6.4x1.6	2.7	2.3
Marigold, African	Crackerjack Mixed	2.7	2.7	8.8	27.8	1.8	4.5	2.7	2.7
Marigold, African	First Lady	3.7	3.7	9	16.4	2	4	3.7	3.7
Marigold, French	Naughty Marietta	4	4	7	20.3	1.1	2.6	4	4
Marigold, French	Queen Sophia	2.7	2.7	4.7	10.8	1.3	2.6	2.7	2.7
Mexican Sunflower	Torch	3.3	3.7	18.9	47.2	1.5	3.4	3.3	3
Nasturtium	Whirlybird Mahogany	3.7	3.7	6	15.6	1.3	2.9	3.7	3.7
Nemesia	Poetry White	2.7	2.7	7.7	17.3	.5	1.8	2.7	3
Nicotiana, Garden	Nicki Red	4	4	13	28.1	6.5x5	8.5x7	4	4
Nicotiana, Hybrid	Tinkerbelle	3.7	3.7	10.3	27.3	2x2.25	8.5x2.5	3.7	4
Nierembergia	Purple Robe	2.3	2.7	5.6	12.4	.5	1.1	2	2
Nierembergia	White Robe	2.5	2.3	3.5	13.2	.4	1.0	2.7	3
Pansy	Frizzle Sizzle Blue	3.3	3.3	4.8	13.3	1.2	2	3.3	3.7
Pansy	Frizzle Sizzle Yellow	2.3	2.3	4.5	10.1	2.9	1.8	2.3	2.7
Pansy	Frosty Rain	4	4	5.3	15.7	.9	1.5	4	4
Pansy	Jolly Joker	3.3	3.3	5.6	14.6	1.3	2.2	3.3	3.3
Pansy	Majestic Giants Mix	3	3	6	14.9	1.2	2.7	3	3
Pansy	Matrix Blue Frost	2.7	3	4.5	13.2	1.3	2.7	2.7	3
Pansy	Matrix Deep Blue Blotch	3	3	5.8	12.3	.8	2.4	3	3
Pansy	Matrix Ocean	3.3	3.3	4.9	12.7	.9	2.3	3.3	3.3
Pansy	Matrix Red Blotch	3.3	3.3	3.8	13.5	1.1	2.3	3.3	3.7
Pansy	Matrix Rose Blotch	2.7	2.7	2.6	9.2	1.2	2.5	2.7	2.7
Pansy	Matrix White Blotch	2.7	2.7	4.7	9.7	1.2	2	2.7	3

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Pansy	Matrix Yellow	3	3.3	4.4	13.3	1.3	2.5	3	3
Pansy	Panola® Rose Picotee	3	3	5	11.7	1.3	1.9	3	3
Pansy	Promise® Antique Shades	2.7	2.7	5.3	15.2	1	1.5	2.7	2.7
Pansy	Promise® Beaconsfield	3	3	2.7	12.4	1.2	2.4	3	2.7
Pansy	Promise® Blue/Blotch	2.3	2.7	4.3	15.8	1.2	2.5	2.3	2.3
Pansy	Promise® Deep Orange	2.7	2.7	5.8	13.2	1.3	2.2	2.7	2.7
Pansy	Promise® Lemon Splash	2.7	3	4	12	1	2.3	3	3
Pansy	Promise® Marina	2.3	2.7	4	14	.8	2	2.3	2.3
Pansy	Promise® Primrose/Blotch	2.7	2.7	4.9	17.2	1.3	2.5	2.7	3
Pansy	Promise® Pure Lilac Shades	3.3	3.7	3.8	14.3	1	2.5	3.3	3.3
Pansy	Promise® Pure Yellow	3	3	4.3	14	1.1	2.3	3	3
Pansy	Promise® Red/Blotch	2	2	3.4	10.3	1.3	2.4	2	2.3
Pansy	Promise® True Blue	3	3	5.2	15	1	2.3	3.3	3
Pansy	Promise® White/Blotch	2.3	2.3	3.3	12.7	1.2	2.3	2	2.7
Pansy	Promise® Yellow Blotch	2.7	2.7	3.8	13.3	1.3	2.1	2.8	3
Pansy	Promise® Yellow Blotch	3	3	3.8	13.1	1.3	2.1	3	3
Pansy	Promise® Yellow/Purple Wing	3	3	3.5	8.6	1.8	2.5	3	3
Pansy	Promise® Yellow/Red Wing	3.3	3.3	4.2	12.3	1.2	2.6	3.3	3.7
Pansy	XXL Golden Yellow	2.7	2.7	4	14.1	1	2.3	2.7	2.7
Pepper, Ornamental	Black Pearl	2.7	3	12.7	16.3	.2	.4	2.7	2.7
Pepper, Ornamental	Chilly Chili	2.3	2.3	8.2	11.5	.9	1.7	2.3	2.3
Pepper, Ornamental	Garda Tricolore	1.3	1.3	10.1	15.3				
Pepper, Ornamental	Peppa Blanca/Rosu	2	1.7	6.3	8.9	.5	1	2	2
Pepper, Ornamental	Peppa Lila/Naranja	2.7	2.7	8.2	11.7	.3	.8	2.7	2.7
Petunia	Carpet Pink Morn	1.7	1.7	4.5	12	1.3	1.8	1.7	1.7
Petunia	Easy Wave™ Coral Reef	2.5	2.3	4.5	13.5	2	2.8	2.7	2.7
Petunia	Opera Supreme Pink Morn	2.3	2.3	6	14	1.2	1.8	2.3	2.3
Petunia	Prism Sunshine	2.3	2.3	8.3	15.8	1.3	2.4	2.3	2.3
Portulaca	Margarita Coral	2.3	2.3	1.8	5.5	.3	1.1	2.7	2.3
Salvia, Scarlet	Red Hot Sally II	2.7	3	6	11.7	1x1.5	3.25x4.75	2.7	2.7
Salvia, Scarlet	Saluti Formula Mix	2.2	2.3	6.3	14.7	2.75x1.75	7.75x2.9	2	2
Salvia, Scarlet	Saluti Salmon/Pink	2	2	5.5	12.8	1.1x.09	4.5x2.75	2	2
Salvia, Scarlet	Saluti White	1.3	1.3	6.5	10.9	2.25x1	4.1x1.25	1	1.3

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Shasta Daisy	Snow Lady	3	3	4.7	13.3	1.8	3.8	3	2.3
Snapdragon	Rocket Rose	3.3	3.3	8.8	28	11.8	7.7	3.3	3.3
Sunflower	Key Lime Pie	3	3	28.2	54	1.9	4.1	3	3
Sunflower	Pro Cut Yellow Lite	3	3	31.8	42.8	3.42	5.3	3	3
Sunflower	Soraya	3	3	49.9	70.8	3.3	6.6	3	3
Sweet Pea	Cuthbertson Floribunda Choice Mix	3	3	29	66.9	.8	1.8	3	2.3
Sweet Pea	Old Spice Mix	3.3	3.3	22.7	55.6	.7	1.3	3.3	3.3
Sweet Pea	Royal Mix	2.7	3	36.2	63	1	1.8	2.7	2.3
Sweet Pea	Spencer Ripple Formula Mix	3.3	3.3	46.5	63.4	.8	1.8	3.3	2.7
Swiss chard	Bright Lights	3.7	3.7	16.6	36.3				
Verbena, Garden	Snowy River	2.2	2.2	3.8	16.3	.3	.8	2.2	2.2
Viola	Microla® Lavender	2	2	4.7	10	.5	.9	2	2
Viola	Skippy® Purple Improved	4	4	4.8	17.5	.8	1.5	4	4
Viola	Skippy® XL Deep Blue-Blotch	3.7	3.7	2.7	12.5	1.5	2.1	3.7	3.7
Viola	Skippy® XL Purple Duet	4	4	5	15.8	.8	1.5	4	4
Viola	Skippy® XL Red-Gold	3.5	3.3	14.8	14	1	1.5	3.7	3.7
Viola	Skippy® Yellow/Purple Wing	4	4	6.3	15.3	1.2	1.5	4	4
Viola	Sorbet® Blue Babyface	4	4	4.2	16.8	.8	1.6	4	4
Viola	Sorbet® Peach Frost	3.5	3.5	4.3	15.7	.7	1.3	3.5	3.7
Wallflower	Citrona Orange	3	3	7.3	17.8	0.9	2.17	3	3
Wallflower	Citrona Yellow	3	3	5.8	20.3	0.7	2.34	3	3.3
Zinnia, Garden	Peggy's Delight	2.3	2.3	18.7	34.8	2.6	5	2.3	2
Zinnia, Garden	Thumbelina Mix	3	3	10.4	25.9	1	2	3	3
Zinnia, Mexican	Persian Carpet	3	3	10.1	24.8	.9	1.9	3	3

About the Agricultural and Forestry Experiment Station

The federal Hatch Act of 1887 authorized establishment of agricultural experiment stations in the U.S. and its territories to provide science-based research information to farmers. The Morrill Act established the land-grant colleges in 1862. The Alaska Agricultural Experiment Station was not originally part of the Alaska land-grant college system. In 1898, the station was established in Sitka, also the site of Alaska's first experiment farm. Subsequent branches were opened at Kodiak, Kenai, Rampart, Copper Center, Fairbanks, and Matanuska. The latter two remain as the Fairbanks Experiment Farm and the Matanuska Experiment Farm. The USDA established the Fairbanks experiment station in 1906 on a site that in 1915 provided land for a college. In 1931, the experiment station was transferred from federal ownership to the

college, and in 1935 the college was renamed the University of Alaska. Early experiment station researchers developed adapted cultivars of grains, grasses, potatoes, and berries, and introduced many vegetable cultivars appropriate to Alaska. Animal and poultry management was also important. This work continues, as does research in soils and revegetation, forest ecology and management, and rural and economic development. As the state faces new challenges in agriculture and resource management, the Agricultural and Forestry Experiment Station continues to bring state-of-the-art research information to the people of Alaska.

z: 0=dead; 1=poor, dead, 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

Seed and Plant Sources

The list does not include all possible seed and plant sources. The list reflects sources from which the Georgeson Botanical Garden has received seeds/plants. No endorsement of companies should be implied by those listed, nor criticism intended of those not listed.

ALASKA SOURCES

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- Ann's Greenhouse, 780 Sheep Creek Rd, Fairbanks AK 99709
Alaska Greenhouse, 1301 Muldoon Rd, Anchorage AK 99514
Clair's Cultivations, 1364 Esro Rd, Fairbanks AK 99712
Denali Seed, PO Box 111425, Anchorage AK 99511, www.denaliseed.com
Dinkel's Fairview Nursery, HC 31 Box 5193, Wasilla AK 99687
Driftwood Nurseries, 7.2 Mile Chena Hot Springs Rd PO Box 10462, Fairbanks AK 99710
Hawk's Farm & Garden Center, 12 Mile Richardson Hwy PO Box 55759, North Pole AK 99705
Holm Town Nursery, PO Box 71565, Fairbanks AK 99707
Plant Kingdom, 620 Fiedeler Rd, Fairbanks AK 99709
Risse Greenhouses, 981 Risse Rd, Fairbanks AK 99712
Seeds of Alaska, Box 3127, Kenai AK 99611
Washburn Farm Nursery, PO Box 823, Palmer AK 99645
Woodland Farms, Mile 311 Parks Hwy, Nenana AK

COMMERCIAL WHOLESALE AND RESEARCH SOURCES (SEEDS AND PLANTS NOT SOLD DIRECTLY TO THE PUBLIC)

- All American Selections, 1311 Butterfield Rd Suite 310, Downer's Grove IL 60515, www.all-americanselections.org
Ball Horticultural Co., PO Box 335, West Chicago IL 60185 (wholesale only), www.ballseed.com
EuroAmerican Propagators (Proven Winners), PO Box 289, Bonsall CA 92003, www.euroamprop.com
Fischer USA, 6899 Winchester Circle Suite 102, Boulder CO 80301, www.fischerusa.com
Goldsmith, PO Box 1349, Gilroy CA 95021, www.goldsmithseeds.com
Green Leaf (Yoder Bros.) 2369 Old Philadelphia Pike, Lancaster PA 17602, www.green-leaf-ent.com
Kieft Pro Seeds Holland, PO Box 63 1606 ZH, Venhuizen Holland, www.kieftseeds.com
Lawyer Nursery, 950 Hwy 200 W, Plains MT 59859, www.lawyer nursery.com
Oglevee Ltd., 152 Oglevee Ln, Connellsville PA 15425, www.oglevee.com

- PanAmerican Seeds, PO Box 438, West Chicago IL 60186, www.panamseed.com
The Flower Fields (Yoder Bros & Ecke Ranch) Carlsbad CA 92008, www.theflowerfields.com
USDA Plant Introduction Stations- NC7, Ames IA, www.ars-grin.gov/ars/MidWest/Ames

GARDEN SOCIETIES AND ORGANIZATIONS WITH SEED EXCHANGES AND SALES FOR MEMBERS ONLY

- Alaska Native Plant Society, PO Box 141613, Anchorage AK 99514, www.aknps.org
American Horticultural Society, PO Box 6118, Alexandria VA 22308, www.ahs.org
North American Rock Garden Society, PO Box 67, Millwood NY 10546, www.nargs.org
Hardy Fern Foundation, Box 60034, Richmond Beach WA 98160, www.hardyferns.org
New England Wildflower Society, 180 Hemenway Rd, Framingham MA 01701, www.newfs.org

RETAIL SOURCES OF PLANTS/SEEDS

- Agway, Inc. Seed Plant, 1225 Zeager Rd, Elizabethtown PA 17022
Alberta Nurseries & Seeds Ltd., PO Box 20, Bowden AB TOM 0K0 Canada, www.gardenersweb.ca
Applewood Seed Co., 5380 Vivian St, Aruada CO 80002, www.applewoodseed.com
B&D Lilies, PO Box 2007, Port Townsend WA 98368, www.bdlilies.com
Bear Creek Nursery, PO Box 411, Northport WA 99157, www.BearCreekNursery.com
Bluebird Nursery, Inc., PO Box 460, Clarkson NE 68629, www.bluebirdnursery.com
Carolina Seeds, PO Box 2658 Hwy 105 Bypass, Boone NC 28607, www.carolinaseeds.com
Clause Seed, 100 Breen Rd, San Juan Bautista CA 95045, www.clausezieier.com
Connell's Dahlias, 10616 Waller Rd E, Tacoma WA 98446, www.connells-dahlias.com
Cook's Garden, PO Box 535, Londonderry VT 05148, www.cooksgarden.com
Daehnfeldt, PO Box 947, Albany OR 97321, www.daehnfeldt.com
Dutch Gardens, Inc., PO Box 2037, Lakewood NJ 08701, www.dutchgardens.nl
F.W. Schumacher Co., Inc., 36 Spring Hill Rd, Sandwich MA 02563, www.treeshrubseed.com
Farmer Seed & Nursery Co., 818 NW 4th St, Fairbault MN 55021, www.farmerseed.com
Ferry-Morse Seed Co., PO Box 4938, Modesto CA 95352, www.ferry-morse.com
Fred C. Gloeckner & Co., Inc., 15 E 26th St, New York NY 10010, www.fredgloeckner.com
Gardens North, 5984 Third Line Rd N, North Gower ON K0A 2T0 Canada, www.gardensnorth.com
Germania Seed Co., 5978 N Northwest Hwy, Chicago IL 60631, www.germaniaseed.com
Gilbert H. Wild & Sons, P O Box 338, Sarcoxie MO 64862, www.gilberthwild.com
H.G. German Seeds, Inc., PO Box 398, Smethport PA 16749
Harris Seeds, PO Box 24966, Rochester NY 14624-0966, www.harrisseed.com

Henry Field's Seed and Nursery Co., 415 N Burnett, Shenandoah IA 51602, www.HenryFields.com

Home Harvest Seeds, 3807 Bank St, Baltimore MD 21224, www.homeharvestseeds.com

Irish Eyes & Garden City Seeds, PO Box 307, Thorp WA 98946, www.irish-eyes.com

J.L. Hudson, PO Box 1058H, Redwood City CA 94064, www.jlhudsonseeds.net

Jackson & Perkins, PO Box 1028, Medford OR 97501, www.jacksonandperkins.com

John Scheepers Kitchen Garden Seeds, PO Box 638, Bantam CT 06750, www.kitchengardenseeds.com

Johnny's Selected Seeds, 1 Foss Hill Rd, Albion ME 044910, www.johnnyseeds.com

Jung Quality Seeds, 335 S High St, Randolph WI 53957, www.jungseed.com

K. Van Bourgondien & Sons, Inc., PO Box 1000, Babylon NY 11702, www.dutchbulbs.com

McClure & Zimmerman, PO Box 368, Friesland WI 53935, www.mzbulb.com

Milk Ranch Specialty Potatoes LLC, 20094 Hwy 149, Powderhorn CO 81243, www.milkkranch.com

Nichols Garden Nursery, 1190 N Pacific Hwy, Albany OR 97321, www.gardennursery.com

Nourse Farms, Inc., Box 485 RFD, South Deerfield MA 01373, www.noursefarms.com

Park Seeds, 2 Parkton Ave, Greenwood SC 29649, www.parkseed.com

Peter de Jager Bulb Co., PO Box 2010, So Hamilton MA 01982

Pinetree Garden Seeds, PO Box 300, New Gloucester ME 04260, www.superseeds.com

Richters, 357 Highway 47, Goodwood ON LOC 1A0 Canada, www.richters.com

R.H. Shumway's Seeds, 334 W. Stoud St, Randolph WI 53956-1274, www.rhshumway.com

Roseraie at Bayfields, Box R, Waldoboro ME 04572, www.roseraie.com

Royal Sluis, Inc., 1293 Harkins Rd, Salinas CA 93901

Rupp Seeds, Inc., 17919 County Rd B, Wauseon OH 43567, www.ruppseeds.com

Seeds of Change, PO Box 15700, Santa Fe NM 87501, www.seedsofchange.com

Seeds of Distinction, PO Box 86 Station A, Toronto ON M9C 4V2 Canada, www.seedsofdistinction.com

Seedway, Inc., PO Box 250, Hall NY 14463, www.seedway.com

Select Seeds, 180 Stickney Hill Rd, Union CT 06076, www.selectseeds.com

Seymour's Selected Seeds, PO Box 1346, Randolph WI 53956, www.seymourseeduk.com

Shepherd's Garden Seeds, 30 Irene St, Torrington CT 06790, www.shepherdseeds.com

Song Sparrow Perennial Farm, 13101 East Rye Rd, Avalon WI 53505, www.songsparrow.com

Stokes Seeds, PO Box 548, Buffalo NY 14240, www.stokeseeds.com

T & T Seeds, Ltd., Box 1710, Winnipeg MB R3C 3P6 Canada, www.ttseeds.mb.ca

Territorial Seed Co., PO Box 157, Cottage Grove OR 97424, www.territorial-seed.com

Thompson & Morgan Seed Co., Box 1308, Jackson NJ, www.thompson-morgan.com

Twilley Seeds, 121 Gary Rd, Hodges SC 29653, www.twilleyseed.com

Valley Nursery, Box 4845, Helena MT 59604

Van Bloem USA, Inc., 500 Pendley Industrial Park, Cumming GA 30130

Vaughan's Seed Co., 5300 Katrine Ave, Downers Grove IL 60515

Vermont Bean Seed Co., Garden Ln, Fair Haven VT 05743, www.vermontbean.com

Vesey's Seeds, Ltd., PO Box 9000, Calais ME 04619-6102, www.veseys.com

W. Atlee Burpee & Co., 300 Park Ave, Warminster PA 18991, www.burpee.com

Waushara Gardens, N 5491 5th Dr, Plainfield WI 54966

Wayside Gardens, 1 Garden Ln, Hodges SC 29695, www.waysidegardens.com

West Coast Seeds, 3925 64 St, Delta BC V4K3N2 Canada, www.westcoastseeds.com

White Flower Farm, PO Box 50, Litchfield CT 06759, www.whiteflowerfarm.com

Wildseed, Inc., PO Box 308, Eagle Lake TX 77434

Pansies, petunias, nasturtiums, and other flowers for the demonstration garden at the Georgeson Botanical Garden.



Without our dedicated volunteers, continued growth and success of the Georgeson Botanical Garden would not be possible.

**A big thank you to our
2008 volunteers!**

*To join these valued people, call Jan Hanscom at
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Walt Babula, Kathy Baum, Deb Benson, Cathi Bouton, Holly Buzby, Jane Campbell, Carolyn Chapin, Olga Cook, Virginia Damron, Susan Dearborn, Donna Dinsmore, Liz Fuerst, Gail Garregues, Ethan Gridley (Eagle Scout), Phyllis Haggland, Judy Harris, Shirley Harris, Kate Hedstrom, Bette Higbie, Hilary Houghton, Victoria Hill, Helen Howard, Ted Kegler, Jeff Karrick, Dee King, Nancy Kilgore, Joanne Klumb, Deb Koons, Sherry Lewis, Susan Lightbody, Carol Ann Lovejoy, Gail Marakami, Gail Mayo, Rose Meier, Martin and Sue Miller, Andee Mitchell, Marsha Munsell, Peggy O'Neal, Mary Parsons, Asa Pendergast (Eagle Scout), Emily Reiter, Debbie Rimer, Susan Risse, Ann Roberts, Lou Rowinski, Barb Rondine, Kathy Seim, Annie Sherman, Libby Silberling, Melody Springer, Ann Swift, Shirley Sterner, Phylis Slone, Curtis Thorgaard, Dida Uotila, Eileen VanWyhe, Maggie Waite, Judy Weber, Susie Zimmerman, Spring Fest volunteers, University Park 2nd grades, The Herb Bunch, the GBG Society Board consisting of Virginia Damron, Diane Hunt, Jamie Smith, Mike Salzman, Curtis Thorgaard, Carolyn Chapin, Melody Springer, Deb Koons, and the many others who made the Victorian Tea and Garden Faire a success.

Special thanks to our partners and volunteers who support the Garden with seeds and other donations:

All America Selections, Flower and Vegetable Seeds

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USDA Plant Introduction Stations, NC7, Iowa State Univ., Plants and seeds



Sweet peas at the Georgeson Botanical Garden.