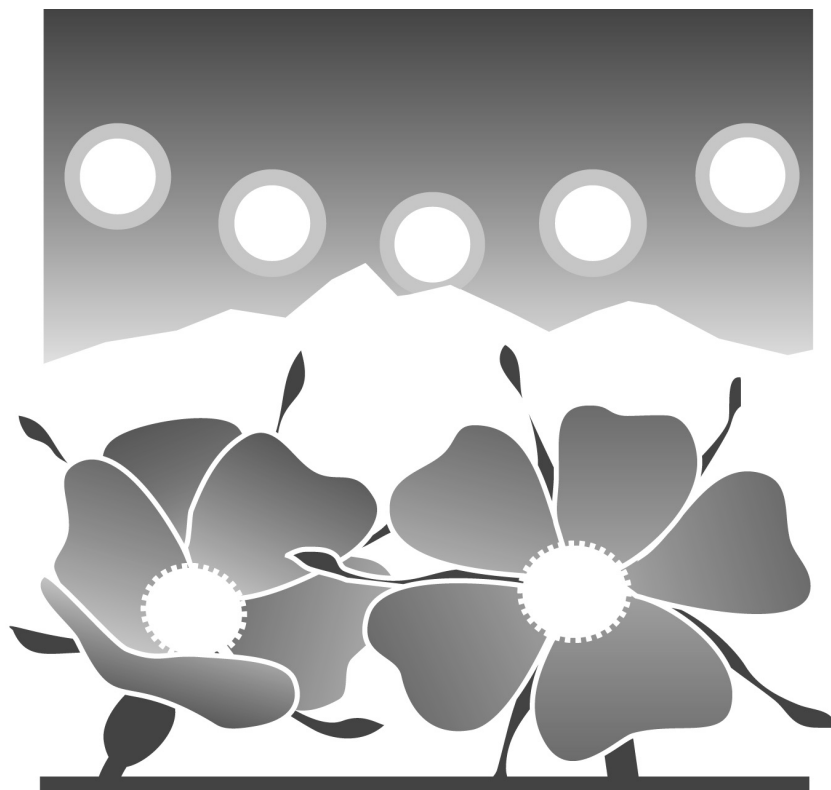


Annual Flowering Plant Evaluations 2004



GEORGESON
BOTANICAL GARDEN

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Weather data were compiled annually from a U.S. Weather Service station, elevation 475ft (145m), located approximately 350ft (107m) west of the garden. The last spring frost was 8 May (30°F, -1°C) (Table 1). The amount of precipitation was 3.3 inches below the past ten year average of 8.4 inches. More than half of the rainfall occurring in May and September. The season was the driest in the past ten years. The thaw degree-day accumulation was 475 degree-days higher than the previous ten-year average and was the warmest during the past ten years. The frost free season of 119 days compared to the previous ten year average of 110 days.

More detailed weather information about the growing season is presented in Table 2. The summer was hot, dry and extremely smoky from a record acreage burned by forest fires. The extra warmth provided one of the best growing seasons in the Interior especially for warm season flowers such as zinnias and celosia. Flower sizes and heights were some of the largest recorded. Local growers and homeowners grew spectacular gardens as long as they had access to irrigation. Annual and perennial landscapes and lawns showed severe water stress if they were not irrigated.

Each year approximately 300 annual flowering plants are included in the tests at the Georgeson Botanical Garden. The annual flower trials were planted from 1–2 June, 2004 in the Perennial Landscape and All American Selections Display Garden of the Georgeson Botanical Garden (64° 51'N, 147° 52'W). Fairbanks

silt loam soil was fertilized with 10-20-20S (4 lbs per 100 sq. ft., 195 g per sq meter) on 31 May. Flowers were grown as seedling transplants with the exception of the sweet peas, annual flower mixes, and scarlet runner beans that were direct seeded. Transplants were hardened off outdoors for one week prior to transplanting.

All cultivars 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 4 June to all plots. Plots were irrigated as needed throughout the summer. A fungicide treatment Cleary 3336 was applied on 7 July and 21 July to inhibit the growth of *Sclerotinia* cottony rot.

Data collected on annual flowers grown in 2004 is presented in Table 3. Each cultivar is tested for three years before being replaced by a new cultivar. Results for those cultivars being replaced after 2004 are summarized in Table 4.

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. From 4 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 one week after the first frost on 4 September.

Table 1. Weather data from the U.S. Weather Service station located just west of the garden for years 1994 - 2004.

Season	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Average temperature: (°F)											
May	52	52	44	48	49	46	44	45	50	44	52
June	57	59	57	61	58	61	59	57	58	61	66
July	62	62	62	64	62	61	59	61	61	61	65
Aug	51	56	52	57	52	58	52	57	54	55	62
Sept.	43	51	41	50	46	45	41	49	47	41	38
Maximum temperature (°F)	89	85	82	87	87	91	83	95	85	82	90
Growing season:											
Last frost	May 6	May 22	June 5	May 25	May 13	May 29	May 15	May 13	May 12	May 24	May 8
First frost	Aug 23	Sep 4	Aug 27	Aug 19	Sept. 13	Sep 11	Sep 16	Sep 24	Sep 2	Sep 13	Sep 4
Frost free days	109	105	83	86	123	105	124	134	113	112	119
Thaw degree days*	3476	3677	2811	3656	3278	3383	2943	3439	2980	3123	3751
Rainfall (inches)	7.21	10.15	8.73	5.86	9.87	8.66	8.55	5.80	9.35	9.91	5.06
Previous winter season:											
Minimum temperature (°F)	-37	-48	-48	-54	-48	-54	-50	-27	-36.3	-34.6	-44.4
Snowfall (inches)	36.3	69	47.8	38.4	30.6	31.6	62.2	39.9	39.7	33.2	51.7

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

Table 2. Weather data summaries for growing season years 2002 - 2004.

Temperature °F	May			June			July			August			September		
	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
Average daily maximum	64	55	64	69	74	80	73	70	76	64	66	75	57	50	47
Monthly high	85	74	76	77	82	90	83	88	89	85	76	84	67	66	61
Average daily minimum	37	33	40	46	48	53	50	50	53	44	44	49	36	31	30
Monthly low	18	27	30	33	40	42	36	41	44	34	39	35	28	17	26
Rainfall (inches)	0.48	0.48	1.67	1.30	0.85	0.42	2.71	5.12	1.21	3.71	1.86	0.50	1.15	1.73	1.26

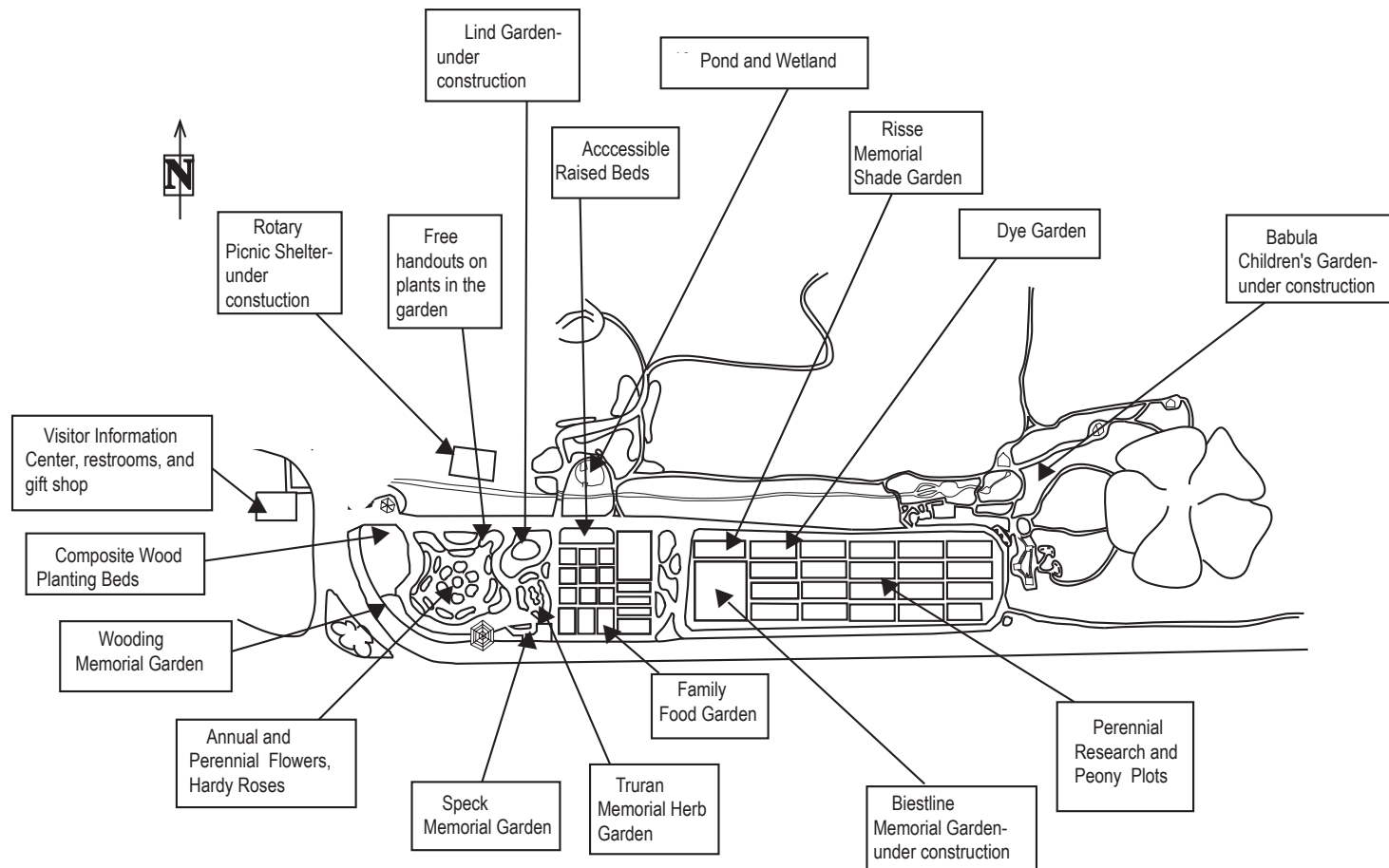


Table 3. Results of tested annual flower cultivars for 2004.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y												Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers									
African daisy		cream, orange, yellow w/brown centers	9	19	½	2½		*	*	*	*	*	*	*	*	*	*	*	*	no	yes
African Lion's Tail		orange	54	66	3	3				*	*	*	*	*	*	*	*	*	*	no	no
Agastache	Apricot Sprite	light orange	7	23	4 x ¾	9 x 2	*	*	*	*	*	*	*	*	*	*	*	*	*	yes	yes
Agastache	Golden Jubilee	purple flowers, yellow foliage	7	23	1 x ½	4 x 1½	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Ageratum	Fields Purple	2-toned purple	3	6	¼	½	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Ageratum	Pearl Royal	lavender	½	6¾	¼	½	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Alyssum, Sweet	Snow Crystals	white	1	9½	½	1¾	*	*	*	*	*	*	*	*	*	*	*	*	*	yes	yes
Alyssum, Sweet	Wonderland Lavender	lavender	¾	3¼	¼	¾	*	*	*	*	*	*	*	*	*	*	*	*	*	yes	yes
Annual Flower Mix	Colorscape Mixture	mixed	2	26	¾	3¾				*	*	*	*	*	*	*	*	*	*	no	no
Annual Flower Mix	Johnny's Butterfly and Hummingbird Mix	mixed	2	26	¾	3¾				*	*	*	*	*	*	*	*	*	*	no	no
Annual Flower Mix	Knee-Hi Mix	mixed	4	48	¾	4½				*	*	*	*	*	*	*	*	*	*	no	no
Annual Flower Mix	Low-Growing Mix	mixed	4	27	¼	2½				*	*	*	*	*	*	*	*	*	*	no	yes
Annual Flower Mix	Surprise Mixture	mixed	9	50	1	3				*	*	*	*	*	*	*	*	*	*	no	no
Asclepias	Ice Ballet	cream	29	37	¾	1½				*	*	*	*	*	*	*	*	*	*	yes	yes
Aster, Annual	Presser Mix	lavender, rose, purple w/yellow centers	9	25	2	5		*	*	*	*	*	*	*	*	*	*	*	*	no	yes
Aster, Annual	Astoria Deep Blue	lavender w/yellow centers	17	25	1	2¾				*	*	*	*	*	*	*	*	*	*	no	yes
Aster, Annual	Compliment Yellow	pale creamy yellow	19	34	3	4½				*	*	*	*	*	*	*	*	*	*	no	no
Aster, Annual	Standy Mixture	pink, purple, rose, lavender, white	11	29	1¼	4			*	*	*	*	*	*	*	*	*	*	*	no	yes
Aster, Annual	Ballet Mix	white, yellow, cream, pink, red, purple, rose, salmon	8	27	2¾	6				*	*	*	*	*	*	*	*	*	*	no	no
Aster, China	Lilliput Blue Moon	2-toned purple/lavender w/yellow centers	11	28	¾	2½				*	*	*	*	*	*	*	*	*	*	yes	yes
Aster, China	California Giant	white, lavender, pink, rose,	7½	21½	2½	4¾				*	*	*	*	*	*	*	*	*	*	no	no
Aster, Peony	Duchesse Formula Mix	blue, yellow, white, sky blue, scarlet, silver-blue, silver-rose	13	26½	1½	3¾				*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Tuberous	Go-Go Mixture	white, cherry, orange, red, rose, white, yellow	6	15	2½	4			*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	BabyWing™ Pink	pink	6	18	¼	½	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	Prelude Pink	pink	4	11	½	1¼	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	Prelude Scarlet	scarlet	4	15	½	1¼	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	Prelude White	white	4	10	½	1¼	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	Harmony Pink	pink	2	10	½	1	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	Harmony Scarlet	scarlet	2	14	½	1	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Begonia, Wax	Harmony White	white	2	10	½	1	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Blue woodruff		blue	4	15	¼	½	*	*	*	*	*	*	*	*	*	*	*	*	*	yes	yes
Burridge Greenthread	Philippine	gold w/mahogany centers	7	22½	¾	1¼	*	*	*	*	*	*	*	*	*	*	*	*	*	no	no
Calendula	Complete Tall Mix	yellow, orange, cream, yellow w/orange tips, w/mahogany centers	12	26¾	1½	2¾	*	*	*	*	*	*	*	*	*	*	*	*	*	yes	yes
Calendula	Flashback	top of petals orange, cream, yellow, bottoms, dark red	15	24½	1¼	2½	*	*	*	*	*	*	*	*	*	*	*	*	*	no	yes

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

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

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

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	no	yes		Billowy floppy stems covered with blooms from mid June through frost, excellent performer
2	2	2	2	no	yes	no	Tall plant for background plantings, interesting monarda-like blooms in tight whorls around the stem
1	1	1	1	slight	yes		Not the most showy Agastache but interesting color, flowers are tiny, Fleuroselect Quality Mark
2	2	2	2	yes	yes		Bushy plants with yellow foliage, not attractive, not recommended as edible herb, All America Selections flower award 2003
				no	no		Buds reddish purple, flowers lavender purple, two-toned color very attractive
3	3	3	3	yes	no		Tiny mounding ageratum, outstanding color and form early in season, some browning in rainy cool weather
3	3	3	3	yes	no	no	Uniform growth excellent for edging, very fragrant, Fleuroselect Gold Medal winner
1	1	1	1	yes	no		Very attractive color, spreads and fills in well, dwarf, very uniform carpet of color, some bleaching of leaves
4	4	4	4	slight	yes	yes	Spectacular mix of flowers in a mid-height flower mix, includes many cultivars rather than wildflowers
3	3	3	3	yes	yes	yes	Spectacular medium-height mix, reached full bloom in August, great late-season show
3	3	3	3	no			Maximum height twice that published, began blooming early July, reached full bloom in August, excellent color mix
3	3	3	3	slight			Excellent mix with great color combinations, exceeded the published height by 11 inches, reached full bloom fastest
4	3	3	3	no			Excellent tall flower mix, did not come into full bloom until August, spectacular late season color
2	2	2	2	yes	yes		Normally flowers in Sept but bloomed in mid July this warm summer, attractive small white flowers, not the best show
3	3	3	3	no	yes		Another aster well suited as a cut flower, good mix of colors, looks ragged in late summer especially with rains
4	4	4	4	no	yes		Great daisy-like flowers with interesting color contrast in flowers, large yellow centers, excellent cut flower
2	2	2	2	yes	yes		Abundant narrow petals stuffed into large balls, stiff stems great for cutting, does not hold up well in cold weather, ragged appearance late in season, needs deadheading
4	4	4	4	no	yes	yes	Abundant flowers on upright straight stems, excellent mix of colors, needs some deadheading late in the season
4	4	4	4	slight	yes		Interesting needle-type petals in puffball shapes, great mix of colors, needs deadheading for best results
3	3	3	3	no	yes	yes	Interesting two-toned petals, abundant clusters of purple flowers, stem length great for cutting, holds up in cold wet weather
4	4	4	4	no	yes		Great mix of colors, excellent midseason blooms, needs deadheading after rain
3	3	2	3	no	yes		Fully double flowers in blend of six colors and two bicolors, thick stems great for cutting, some leaf browning
3	3	3	3	no			Great, compact container begonia, free flowering, excellent support stems, very nice mix of colors
3	3	3	3	no	no	no	Leggy, needs companion plants in containers for best show, late in season there are lots of bare stems
4	4	4	4	no	no		Light green foliage, need close spacing for best cover, grew better because of the very warm summer
4	4	4	4	no	no		Very nice color and dark foliage, need close spacing for best cover, grew better because of warm summer
4	3	3	3	no	no		Needs deadheading and close spacing for best cover, excellent flowers for shade
4	3	3	3	no			Excellent color and spread in this warm summer, very little maintenance
4	4	4	4	no			Very nice plant for shade, bright attractive color
4	3	3	3	no			Electric white flowers, plants grew well in hot season, needs close spacing to get mass effect
2	2	1	2	no	no		Tiny clusters cover the thin stems early in season, finished early, best planted as early season color
2	2	2	2	no	no	no	Billowy plant covered with gold blooms, wiry floppy stems, excellent edging plant when grown in masses
2	2	2	2	no	yes		Long stems, great for cutting, nice mix of colors, some semi-doubles, most singles, solid colors and bicolors
2	2	2	2	no	yes	yes	Lots of blooms all season, interesting contrast between top and bottom of petals, will self sow, needs deadheading

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

Table 3. Results of tested annual flower cultivars for 2004, cont.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y						Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers			
Calendula	Geisha Girl	orange w/bronze tips, dark red centers	19	29	1¼	3	* * *	* * *	* * *	* * *	* * *	* * *	* * *	no	yes
Calendula	Pacific Beauty Mixed	orange, yellow w/dark red centers	19	27	1¼	2¾	* * *	* * *	* * *	* * *	* * *	* * *	* * *	yes	yes
Calendula	Porcupine	orange	14	23	1½	2¾	* * *	* * *	* * *	* * *	* * *	* * *	* * *	yes	yes
Calendula	Red Splash	orange, yellow, cream w/red highlights	15	23	1¼	3	* * *	* * *	* * *	* * *	* * *	* * *	* * *	no	yes
California Poppy	Golden Tears		5	18½	¾	2½		* * *	* * *	* * *	* * *	* * *	* * *	no	yes
California Poppy	Ivory Castle	creamy white	5	17½	¾	2½	* * *	* * *	* * *	* * *	* * *	* * *		no	no
California Poppy	Mission Bells	white, pink, orange-red, cream, rose, orange	3	17	¾	2½	* * *	* * *	* * *	* * *	* * *	* * *	* * *	no	yes
California Poppy	Inferno	electric orange red	4	14	1	2½	* * *	* * *	* * *	* * *	* * *	* * *		no	no
Canary-bird Vine	Wings of Gold	yellow w/lime green spur	36	72	1	1½		* * *	* * *	* * *	* * *	* * *		no	no
Cardinal Climber		scarlet								* * *	* * *	* * *		no	no
Celosia	Fresh Look Red	deep red	3	8	1 x ½	4 x 3		* * *	* * *	* * *	* * *	* * *		no	no
Celosia	Fresh Look Yellow	yellow w/orange highlights	7	14	1½ x ½	2¾ x 1			* * *	* * *	* * *	* * *		no	no
Celosia	Glow Carmine	carmine red	5	8	1½ x ½	4 x 3			* * *	* * *	* * *	* * *		no	no
Celosia	Glow Pink	pink	7	19	1½ x ½	7 x 4½			* * *	* * *	* * *	* * *		no	no
Chilean Glory Vine	Tresco Cream	yellow, rose	72	140	¾	1			* * *	* * *	* * *	* * *	* * *	yes	yes
Chinese Forget-me-not	Mystery Rose	lilac pink	12	22	4 x 3	7 x 3½				* * *	* * *	* * *		no	no
Chrysanthemum	Polar Star	white and yellow w/brown centers	15	35	2	3½			* * *	* * *	* * *	* * *		no	no
Chrysanthemum (paludosum)	Snowland	white w/yellow centers	3	20	½	1½	* * *	* * *	* * *	* * *	* * *	* * *	* * *	yes	yes
Chrysanthemum multicaule	Yellow Buttons	yellow	4½	16½	½	1½	* * *	* * *	* * *	* * *	* * *	* * *	* * *	no	yes
Chrysanthemum Tricolor	Coconut Ice	white w/rose markings, rosy pink w/brown and yellow centers	2½	16	1¼	2¼			* * *	* * *	* * *	* * *		no	no
Chrysanthemum Tricolor	Summer Festival	white w/red markings, yellow w/mahogany markings, yellow, white/mahogany centers						* * *	* * *	* * *	* * *	* * *		no	no
Clarkia	Passion for Purple	purplish pink	4	16	1	1¾	* * *	* * *	* * *	* * *	* * *	* * *		no	no
Cleome	Pink Queen	pink/rose bicolor	27	47	3 x 3	7½ x 6			* * *	* * *	* * *	* * *		no	no
Cleome	Solo	white petals, red sepals	11	19	1¾ x 1½	3 x 1½				* * *	* * *	* * *		no	no
Coneflower, Branched	Ace of Spades													no	no
Coreopsis	Mardi Gras	gold w/red centers	11	19	½	1½			* * *	* * *	* * *	* * *		no	no
Coreopsis	Seashells	gold w/mahogany centers	11	23	1	1½			* * *	* * *	* * *	* * *		no	no
Coreopsis, Large-flowered	Early Sunrise™	yellow	9	21	1¾	2½			* * *	* * *	* * *	* * *	* * *	no	yes
Coreopsis, Large-flowered	Rising Sun™	yellow w/red fleck	11	16½	1	2¼				* * *	* * *	* * *		no	no
Cosmos	Campus Apricot	pink	9	23	1	2½			* * *	* * *	* * *	* * *		no	no
Cosmos	Candy Stripe	pink w/magenta edges, yellow centers	9	29	1¼	2½	* * *	* * *	* * *	* * *	* * *	* * *		no	no

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

Plant ratings ^z					Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying		
quantity	quality							
2	2	2	2	no	yes		Nice contrast of orange petals with brown centers, small recurved petals when young, abundant blooms, deadhead	
2	2	2	2	slight	yes		Reliable, nice color, abundant blooms, needs deadheading	
3	3	3	3	slight	yes		Petals folded under, looks like tubes of porcupine quills, unusual display, interesting two-toned color of petals	
2	2	2	2	no	yes		Good mix of colors with red highlights, needs serious deadheading to maintain show all season	
3	3	3	3	no			Compact mounds of finely dissected foliage covered with flowers, very attractive, stunning display	
2	2	2	2	no	yes		Nice contrast with dark green foliage, floppy stems, flowers close up in cloudy weather, needs deadheading	
3	3	3	3	yes	yes	no	Abundant semi-double blooms in a great mix of colors, floppy weak stems, large open mounds	
4	4	4	4	no	yes	no	Electric flower color, truly a knockout, flowers close up in cold overcast weather	
3	3	2	3	no	no	no	Moderately vigorous vine with interesting feathery petals, some brown foliage and curled leaves	
				no	no	no	Interesting tiny morning glory-like blooms early, not a vigorous climber, no blooms late in season	
2	2	2	2	no	no	no	Short spikes of color, plants remain tiny, grown in raised beds, All America Selections Gold Medal flower award and Fleuroselect Gold Medal 2004	
2	2	2	2	yes	no	yes	Late to bloom, electric colors, All America Selections flower award and Fleuroselect Quality Award 2004	
3	3	3	3	no	no	no	Short spikes, grown in raised beds, needs close spacing, not nearly as vigorous and showy as "Glow Pink"	
3	3	3	3	no			Striking colors, grew very well in raised beds, better branching and filling than 2003	
4	4	4	4	no	yes	no	Clusters of bicolor flowers, very ornamental, glossy green segmented foliage, vigorous climber	
2	3	2	2	no	yes		Better than blue cultivars, strong upright stems loaded with flowers, wonderful contrast between flowers and foliage	
2	3	3	3	no	yes	yes	Large attractive flowers on rangy floppy stems, needs lots of space to spread out, tolerate only light frosts	
4	4	4	4	no	yes	yes	Little daisy flowers, abundant blooms cover the mounded plants	
2	2	2	2	no	yes		Billows of electric yellow blooms, well worth growing as edging, closes in cloudy weather	
2	2	2	2	yes	yes		Beautiful mix of colors on double blooms, lots of flowers on upright and floppy stems	
				yes	yes		Floppy stems, abundant blooms, outstanding mix of flower colors and shapes, some solids, some multicolored rings	
2	2	2	2	no	yes		Thin floppy stems loaded with feathery blooms, attractive in mass plantings	
2	2	2	2	yes	yes		Tall background plant with nice bicolor petals, spines make it difficult to cut	
1	1	1	1	no	yes	no	Unattractive tiny flowers, not showy	
				no	yes		Big bushy plant, no flowers, not at all showy, great if you want a green bush	
2	2	2	2	no	no	yes	Clouds of color, nice filler or in mass plantings, no maintenance needed, thin linear petals on wiry stems	
3	3	2	3	yes	no		Big bushy plant with tiny flowers with fluted edges, wiry floppy stems are difficult to use as cut flowers	
2	2	2	2	no			Not many blooms and fairly small, a few blooms in mid June, full bloom was the first week of July	
2	2	3	2	no			For the size of the plant there were not many blooms and they were fairly small, not as showy as other coreopsis	
1	1	1	1	yes	yes	no	Requires dark pretreatment, huge green bush, begins blooming in September at lower latitudes	
1	1	2	1	yes	yes		Interesting picotee-type petals, not as many blooms as other cosmos, floppy stems with few flowers	

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Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
1	1	2	1	no	yes	no	No blooms without dark treatment of seedlings
2	2	2	2	no	no	no	Not a vigorous climber, more blooms than 2003 but still sparse, grow only in the warmest sites
1	1	4	1	no	yes		Flowers look like bachelor's buttons but longer stems, needs deadheading, best as filler or accent
3	3	3	3	no	no		Clouds of yellow, some disease late in season, excellent edging plant
3	4	3	3	no	yes		Compact symmetrical flowers in perfectly round button form, outstanding flecked colors
4	4	4	4	no	no		Lemon yellow blooms with twisted tattered edges, cactus form, outstanding bloom shape
3	3	3	3	no	yes		Plants loaded with bicolor flowers, many hidden by foliage, showy, early to bloom
3	3	3	3	no	yes		Outstanding blooms, great contrast of blooms with glossy foliage, late to bloom but worth the wait
3	3	3	3	no	yes		Many two-tone solid and bicolor flowers that sit on top of foliage, two distinct petal types, showy dahlia from seed
3	3	3	3	no	yes		Nice bicolor flowers, shorter than most grown in the garden
3	4	4	4	no	no		Beautiful pastel, two-toned blooms late in season
3	4	3	3	no	yes		Very attractive waterlily stype flower, tall plants, mid-season blooms
3	3	3	3	no	yes		Showy bicolor flowers, large blooms, late but nice
3	3	3	3	yes	yes		Medium-sized, semi-double blooms, excellent mix of colors with lots of flowers, needs deadheading
3	4	3	3	yes	yes		Huge balls of flowers on tall stems, needs closer spacing than shorter dianthus to fill in the beds
4	4	4	4	no	yes		Large balls of flowers on tall stems, very colorful, doesn't branch, late to bloom, needs close spacing
3	3	3	3	yes	yes		Huge balls of flowers, flowers start white and age to pinks and rose, nice length for cutting
1	1	1	1	yes	yes		Does not branch, needs close spacing, nice large flower clusters, effect is poor, performed poorly
3	3	3	3	slight	yes		Plants do not fill in well, needs closer spacing for mass plantings
2	2	2	2	yes			Late to come into full bloom, plants were not well branched, not the best dianthus
1	1	1	1	no	yes	yes	Plants did not fill out well, needs close spacing, ratty appearance when wet, needs deadheading
3	3	3	3	yes	yes		Rounded clusters full of blooms, nice fragrance, needs close spacing, deadhead, Fleuroselect Gold Medal
3	3	2	3	yes	yes	yes	Tall upright sprays of mixed colors, petals are slightly fringed, nice addition to the cutting garden
		3	3	no	no		Grown in containers, start early in greenhouse, cascading silvery foliage, not vigorous
1	1	1	1	no			Tiny mounding plants covered with early flowers, plant becomes leggy and few-flowered, use in containers
		3	3	no	no	no	Great mix of foliage colors, fills in bed well with large mounded plants
4	4	4	4	no			Attractive small blooms, full bloom until late July, All America Selections Award Winner and Fleuroselect Gold Medal winner for 2005.
4	4	4	4	no	yes	yes	Outstanding blanket of flowers, mounds of plants choked with blooms with great two-toned effect
2	2	3	3	yes	yes		Many flowers, interesting color, blooms all season, All America Selections bedding plant award 2003
3	3	3	3	no	no		Attractive color, closes up in cloudy weather, tolerate light frost
3	3	3	3	slight	no		Brilliant mix of colors with ornamental rosy stripes, closes up in cloudy weather, gorgeous in full sun
3	3	3	3	no	no		Attractive striped petals, closes up in cloudy weather, gorgeous in full sun, a favorite of Alaskans and visitors alike
2	2	2	2	no			Flowers not as abundant as other Gazanias, interesting silvery foliage, Fleuroselect Quality Award
3	3	3	3	no	yes		Compact plants with excellent color mix, closes up in cloudy cold weather, fine silvery foliage
3	3	3	3	slight			Brilliant balls of flowers, fills in well, very attractive display through most of summer, needs a little deadheading
4	4	4	4	yes			Outstanding cover of flowers with very attractive color, blooms all season, some deadheading needed

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

Table 3. Results of tested annual flower cultivars for 2004, cont.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y						Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers			
Godetia	Flamingo Mix	pink, lavender, white, rose	8	16½	1½	2¾					*			no	yes
Gypsophila	Gypsy Deep Rose	rose pink	1¼	6	¼	¼	*	*	*	*	*	*	*	no	no
Hollyhock	Queeny Purple	dark rose	11	26	1¼	5			*	*	*	*	*	no	yes
Hyacinth Bean	White	white	36	60	¾	1		*	*	*	*	*	*	no	no
Impatiens, Garden	Dazzler [®] Apricot Improved	apricot pink	2	6	½	1	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Dazzler [®] Pink Deep Improved	pink	3	8	1	1¼	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Dazzler [®] Star Mix	red, rose, violet, coral w/white star pattern	1	12	½	1¼	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Dazzler [®] Cranberry Improved	dark wine red	4	12	½	¾	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Dazzler [®] Lilac Splash Improved	deep violet w/dark magenta eye	4	12	1¼	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Deco Orange	orange	1	17	1¼	1¾	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Double Fanciful Coral	coral	1	15	1	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Fanciful Orchid Rose	rose	6	15	½	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper Burgundy Improved	burgundy	4	15	½	1	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper Deep Orange Improved	orange	2	18	1	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper Lilac Improved	lilac pink	4	10	½	¾	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper Pink Improved	pink	2	12	1¼	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper Red Improved	red	12	19	1¼	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper Soft Blue Improved	lavender pink	2	12	1¼	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Showstopper White	white	3	13	1¼	1¾	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Super Elfin Red Improved	red	1	4	1¼	2	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Super Elfin Ruby	red	3	4½	1½	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Swirl Coral Improved	coral w/lighter coral centers	1	15	1¼	1½	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Swirl Mix Monet	pink or rose fading to light pink at centers	1	15	1	1¾	*	*	*	*	*	*	*	no	no
Impatiens, Garden	Swirl Raspberry	rose	3	10	1	1¾	*	*	*	*	*	*	*	no	no
Jewels of Opar		hot pink	12	24	⅛	⅛		*	*	*	*	*	*	no	no
Lavatera	Easter Parade	white, shades of pink	14	22	1¾	3		*	*	*	*	*	*	yes	yes
Lavatera	Ruby Regis	pink w/dark red veins	5	13½	1¾	2½		*	*	*	*	*	*	yes	yes
Love Grass	Wind Dancer™	green maturing to tan	14	24				*	*	*	*	*	*	yes	yes
Love-in-a-Mist	Miss Jekyll Blue	blue	3½	15	1	1½	*	*	*	*	*	*	*	no	no
Lupine	Band of Nobles	pink/rose, purple/white, purple/red bicolors	14½	28	1¼ x ¾	10½ x 1¼	*	*	*	*	*	*	*	yes	yes

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

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

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

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
4	4	4	4	no	yes	no	Abundant blooms, outstanding clusters of flowers, mounds of color, needs some deadheading
1	1	1	1	no	no	no	Mostly double blooms, some Sclerotinia late in season, no maintenance needed, All America Selections bedding plant award and Fleuroselect Quality Award 2004
4	4	4	4	no	no	no	Short, flowers often hidden by foliage and new upright branches, first hollyhock to bloom reliably in Fairbanks All America Selections flower award winner and Fleuroselect Quality Mark 2004
2	2	2	2	no	yes	no	Not as good as scarlet runner bean for trellises, not as vigorous but nice white contrasting color
3	3	3	3	n	no	no	Interesting apricot pink color
3	3	3	3	no	no	no	Large flowers, attractive clear pink color
4	3	3	3	no	no	no	Interesting star pattern on petals, uniform show for all colors in mix, more and larger blooms this year
3	4	3	3				Compact uniform habit with masses of blooms, flowers freely to frost, attractive flower color-a favorite with visitors
4	3	3	3	no			Compact uniform habit with masses of blooms, flowers freely to frost, abundant blooms in warm summer
4	4	4	4	no	no	no	Additional summer heat really made this cultivar grow well, excellent growth and spread this season
4	3	3	3	no	no	no	Very ornamental double petals, does not spread
4	3	3	3	no	no	no	Multi-petaled flowers are slightly smaller than other cultivars
3	3	3	3	no			Visitors preferred other reds more
3	3	3	3	no			Flowers freely, good in containers, excellent flower color contrasts well with foliage, deep rich color
3	3	3	3	no			Flowers freely, also good in containers, excellent solid color with medium-sized blooms
4	3	3	3	no	no	no	Good-sized flowers with two-toned color, beautiful contrast of pink ground color and rose overtones, holds up well
4	3	3	3	no			Outstanding deep red color, excellent contrast with dark green foliage, more abundant blooms this season
3	3	3	3	no			Flowers freely, good in containers, very popular color with visitors
4	3	3	3	no			Flowers freely, good in containers, brilliant white for shade, great contrasting foliage
4	3	3	3	no	no	no	More and larger blooms this year than last, grew well in warm summer, very good clear red color
4	3	3	3	no	no	no	Good flower size and color, bright blooms, more blooms this year
4	3	3	3	no	no	no	Attractive picotee pattern, a popular color with visitors
4	3	3	3	no	no	no	Mixed colors, not as attractive as solid colors, medium-sized flowers
3	3	3	3	no	no	no	Interesting color mix with swirl patterns on all petals, very attractive large flowers
				no	yes	yes	Tiny flower and sparse stems, nearly invisible in the garden, needs close spacing, poor show
2	2	2	2	no			Poor seed germination, plants never became established, died early probably from Sclerotinia cottony rot
3	3	3	3	no	yes	no	Bloomed well all season, only Lavatera in trials to grow well, showy all season, tolerates light frost
3	3	3	3	no			Billowy grass with narrow blue green foliage, soft and delicate
1	1	1	1	no	no		Blooms early, then dwindles, interesting seed heads but not very showy, feathery foliage
2	3	3	3	no	yes		Tall flower stalks covered with blooms for mid and late season show, fuzzy seed pods in late August

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Table 3. Results of tested annual flower cultivars for 2004, cont.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y						Frost tolerance			
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers				
Lupine	Gallery Yellow	yellow	23	41	3 x 1	13¼ x 2			*	*	*	*	*	*	yes	yes
Marigold, African	Flagstaff	dark orange	6	28	1½	3½			*	*	*	*	*	*	no	no
Marigold, African	Gold n' Vanilla	yellow, cream, orange mix	4	23¼	1½	4¼			*	*	*	*	*	*	no	no
Marigold, African	Inca II Primrose	light yellow	5	16	1¼	4½			*	*	*	*	*	*	no	no
Marigold, African	Pesche's Gold	gold, yellow w/yellow centers	13	30	1¼	3¼			*	*	*	*	*	*	no	no
Marigold, African	Cempoalxochitl	yellow and orange striped	10	31½	1¼	2½			*	*	*	*	*	*	no	no
Marigold, African	Perfection Mixture	yellow, gold, orange	5	24	1½	4			*	*	*	*	*	*	no	no
Marigold, French	China Cat Mix	gold w/yellow markings, yellow w/gold markings, gold, mahogany	7	43	1¼	3⅛	*	*	*	*	*	*	*	*	no	no
Marigold, French	Durango Bolero	gold w/red markings	6	12	1¼	2¼	*	*	*	*	*	*	*	*	no	no
Marigold, French	Durango Mix Outback	yellow, orange, red/yellow and red/orange bicolors	6	18	1¼	3½	*	*	*	*	*	*	*	*	no	no
Marigold, French	Durango Red	mostly red w/orange markings	8	17	2¼	3	*	*	*	*	*	*	*	*	no	no
Marigold, French	Durango Yellow Improved	yellow	2	15	1¼	3	*	*	*	*	*	*	*	*	no	no
Marigold, French	Honeycomb	orange w/red markings	5½	18½	1¼	2¼	*	*	*	*	*	*	*	*	no	no
Marigold, Signet	Luna Yellow	yellow	4	15	½	1	*	*	*	*	*	*	*	*	no	no
Melampodium	Lemon Delight	light yellow w/dark yellow centers	1½	11	¾	1	*	*	*	*	*	*	*	*	no	no
Mimulus	Mystic Mix	yellow w/red spots, red, orange	1½	6	1¼	2¼	*	*	*	*	*	*	*	*	yes	yes
Nasturtium	Alaska Salmon Orange	orange	15	33	2¼	3½			*	*	*	*	*	*	no	no
Nasturtium	Milkmaid	creamy yellow	3	29	1	2			*	*	*	*	*	*	no	no
Nasturtium	Peach Melba Superior Wina	yellow w/orange throat	5	10	2	3			*	*	*	*	*	*	no	no
Nasturtium	Primrose Jewel	yellow	3½	15	1	2¼			*	*	*	*	*	*	no	no
Nasturtium	Whirlybird Cherry Rose	rose	2	16	1¼	3			*	*	*	*	*	*	no	no
Nasturtium	Vesuvius	salmon pink w/dark red markings	3	14	1¼	2½			*	*	*	*	*	*	no	no
Nasturtium	Caribbean Cocktail	rosy pink	2	11	1	2½			*	*	*	*	*	*	no	no
Nasturtium	Fiery Festival	brilliant orange red	8	19	1¼	2½			*	*	*	*	*	*	no	no
Nemesia	Blue and White	blue and white bicolor	3	14½	¼	¼			*	*	*	*	*	*	no	yes
Nemesia, Dwarf	Nana Compacta Orange Prince		4	14½	½	1			*	*	3	*	*	*	no	no
Nicotiana, Alata	Lime Green	greenish yellow	8	26	3 x 1½	5½ x 5			*	*	*	*	*	*	yes	yes
Nicotiana, Alata	Sensation White	creamy white	24	67	8 x 5	21 x 12			*	*	*	*	*	*	no	yes
Nicotiana	Langsdorfii	greenish yellow	8½	23	2 x ⅛	2 x 2			*	*	*	*	*	*	no	yes
Osteospermum	Glistening White	white w/deep blue centers	7	18	1¼	3¼	*	*	*	*	*	*	*	*	yes	yes
Palafoxia		lavender pink	10	22	½	1			*	*	*	*	*	*	no	no
Pansy	Atlas Windjammer Mix	orange, purple, lavender, white w/lavender face	5	16	1¼	2¼	*	*	*	*	*	*	*	*	yes	yes
Pansy	Bronze Tone	burnt orange edged in yellow w/mahogany face	3½	15	1¼	2¼	*	*	*	*	*	*	*	*	yes	yes
Pansy	Brunig	mahogany face edged in yellow	6	11	1¼	2¼			*	*	*	*	*	*	yes	yes
Pansy	Coronation Gold	gold	5	18	1¼	2½	*	*	*	*	*	*	*	*	yes	yes
Pansy	Fama Orange	orange	2½	13	1¼	2½	*	*	*	*	*	*	*	*	yes	yes
Pansy	Ice Cream Mix	yellow, rose, cream	6	16	1½	2¼	*	*	*	*	*	*	*	*	yes	yes
Pansy	Luna	yellow, clear face	4	16	1	2¼	*	*	*	*	*	*	*	*	yes	yes

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Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	no	yes		Dwarf strain, excellent contrast with dark green foliage
2	2	2	2	yes	yes	yes	Very attractive large flowers with fluted petals, needs some deadheading through season, intense color
2	2	3	2	yes	yes	yes	Interesting mix of colors, needs deadheading late in season to remove rotten flowers
4	4	4	4	yes	no	yes	Attractive color, huge flowers, needs deadheading, water soaked appearance in cold wet weather
2	2	2	2	yes	yes	yes	Very interesting flowers with frilly edges, abundant blooms, nice big full plant
3	3	3	3	no			Very nice bushy marigold covered with small flowers, some deadheading needed
4	4	4	4	yes	yes	yes	Very large flowers cover the plant nearly all season, excellent mix of colors, little maintenance required
4	4	4	4	no	yes	yes	Attractive big mounds covered with blooms, some double, others single, needs no maintenance, great filler
3	3	3	3	yes	no	yes	Interesting markings on petals, needs deadheading in mid season, slightly taller in warm summer
3	3	3	3	yes			Very good color display all season, needs deadheading, uniform height
3	3	3	3	yes	no	yes	Attractive rich dark red color, uniform height, needs deadheading for best color
3	3	3	3	yes	no	yes	Very nice color display, bright vibrant even color for mass plantings, large blooms
3	3	3	3	no	no	yes	Elegant blooms, interesting patterns on flower petals, one of the best French marigolds
2	2	2	2	no	no	yes	Great mounds of bright color, reliable, attractive all season, needs some deadheading for full season color
4	4	4	4	no	no		Mounds covered with daisy-like blooms, needs close spacing for best mass effect, Fleuroselect Quality Award
2	2	1	2	no	no	no	Excellent growth this year, masses of multicolored flowers with interesting spotted throats
3	2	3	3	no	yes		White speckled foliage, mostly orange, many plants appear diseased with poor weak growth
3	3	3	3	yes	yes		Beautiful color, striking contrast with mounds of foliage, large open flowers
2	3	3	3	no	yes		Attractive color, fills in well
3	3	3	3	yes	yes		Trailing, plenty of flowers above foliage, very showy, excellent color, some double flowers, fluted edges
3	3	3	3	no	yes		Good balance of flowers and foliage, many flowers hidden beneath foliage, great flower color
3	4	3	3	no			Very attractive flower color, excellent vegetative growth
3	3	3	3	no	yes	no	Miniature leaves, flowers held just above the foliage, showy
3	3	3	3	yes	yes	no	Bright showy colors, plenty of blooms above the foliage
3	3	2	3	no	no	no	Excellent growth this year, abundant blooms, very ornamental bicolor flowers, needs deadheading
1	1	1	1	yes	no	no	Nice plant very early in season but died out early, not a good performer this season
2	2	2	2	yes	yes		Excellent color, abundant trumpet-shaped blooms, tolerates only light frost
3	3	3	3	no	yes		Tall plants with clusters of white flowers, excellent for background in borders
2	2	2	2	yes	yes		Excellent color, abundant tubular blooms, uniform height, color combines well with reds or purples
2	2	2	2	no	yes		Very ornamental, ragged late in the season, needs deadheading
				slight	yes		Bushy plants with tufts of flowers, needs close spacing and deadheading for best results
2	3	3	3	yes	yes	yes	Excellent combination of colors, some flowers with ruffled edges, most with dark faces
3	3	3	3	yes	yes	yes	Interesting color combinations, works well with rudbeckias and other gold/brown flowers, flowers abundantly, no maintenance
3	3	3	3	slight	yes		Interesting sharply contrasting colors on petals, yellow edges are vibrant against mahogany centers
3	3	3	3	yes	yes	yes	Huge abundant blooms, mostly solid colors, very bright, continuous color all season, tolerates light frost
2	2	2	2	yes	yes		Attractive clear orange blooms, flowers and foliage tolerate only light frost, good color and size all season
3	3	3	3	yes	yes	yes	Abundant medium sized flowers, interesting mix of colors, not the most popular in the garden
2	2	2	2	no	yes	yes	Reliable color all season, very nice solid color on large flowers, no maintenance needed

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Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	no	yes	yes	Large flowers, attractive bicolor, plants loaded with blooms, interesting mix of color
3	3	3	3	no	yes	yes	Great mounds of color nearly all season, unusual and attractive color combination
4	4	4	4	yes	yes	yes	All America Selections flower award winner for 2002, Fleuroselect Gold Winner, outstanding color, striking markings needs deadheading, looks ragged after periods of cold wet weather
3	3	3	3	yes	yes	yes	Beautiful well-balanced mix of colors, abundant blooms all summer, no maintenance
3	3	3	3	yes			Outstanding clear rose color, abundant blooms, very nice performer all season
4	4	4	4	yes		yes	Spectacular mounds of flowers, almost seems like more flowers than foliage, excellent all season
3	3	3	3	yes	yes	yes	Very attractive mix of deep rose and white flowers, rich velvety texture
3	3	3	3	slight	yes	yes	Abundant large blooms, nice combination of colors, overwintered in shade garden
1	1	1	1	no			Also recommended for containers
4	4	4	4	yes	no		Outstanding carpet of small to medium velvety flowers, spreads well, try in containers, All America Selections flower award winner 2003, Fleuroselect Gold Medal winner
4	4	4	4	yes	no	no	Very ornamental star-patterned petals, needs deadheading late in season
3	3	3	3	yes	no	no	Interesting white picotee edging on ruffled petals, very showy, susceptible to Sclerotinia rot, All America Selections winner
4	4	4	4	yes			Outstanding performer all season, large showy flowers, little evidence of Sclerotinia, a visitor favorite
3	3	3	3	yes	no	no	Attractive mix of colors, abundant blooms, needs deadheading, susceptible to Sclerotinia rot
4	4	4	4	yes			Outstanding performer all season, large showy flowers, little evidence of Sclerotinia, a visitor favorite
4	4	4	4	yes			Outstanding mounds of abundant flowers, very nice color, needs some deadheading late in season
4	4	4	4	yes	no	no	Excellent carpet with blooms, needs deadheading after rain, superb in containers, cascading form
2	2	2	2	no	no	no	Outstanding color, plant spreads well to form solid mats of color, recommended for containers and baskets
3	3	3	3	no	no	no	Very dramatic, flowers hold up well, excellent in containers, needs some deadheading
4	4	4	4	yes			Outstanding color, one of the best-rated petunias by visitors, great spread, moderate-sized flower size
3	3	3	3	yes			Grow in raised beds, cascades of blooms, ragged late in season with some Sclerotinia damage
2	2	3	2	yes	no	no	Frilly-edged blooms, strong vibrant color, needs deadheading, Fleuroselect Quality Award winner
3	3	3	3	yes	no	no	Attractive early in season, All America Selection bedding plant award 2004, Fleuroselect Quality Award winner
3	3	3	3	yes	no		Poor seed germination, striking flower color, fills in well, All America Selections flower award 2003
3	3	3	3	yes	no	no	Fills in well, nice mix of colors, purple flowers most fragrant, pock marked in cold wet, deadhead
4	4	4	4	yes	no	no	Huge mounds of color, no maintenance, a visitor favorite, no pests and no evidence of Sclerotinia rot
3	3	3	3	yes	no		Spreads well, forms short carpet of color, best blooms in mid to late summer, Sclerotinia late in season Tolerates light frosts, All America Selections flower award 2002, Fleuroselect Gold Medal winner
2	2	2	2	yes	no		Excellent two-toned yellow flowers with ornamental ruffled petals, excellent contrast with green foliage
3	3	3	3	yes			Easily reached full bloom, but there were periods during the summer when blooming faltered Plants filled in very well, blooms were very attractive, slight Sclerotinia rot at the very end of the season
4	4	4	4	no	no	no	Huge flowers on mounding plants, grown in containers this season with excellent results
2	3	3	3	no			Petite mounds covered with two-toned flowers, needs close spacing for best results
4	4	4	4	yes			Interesting mix of frilly-edged petunias, some picotee, others solids
2	2	2	2	yes			Smaller flowers than many other petunias and not as showy, unusual mix of colors

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

Table 3. Results of tested annual flower cultivars for 2004, cont.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y				Frost tolerance						
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers					
Petunia	Ramblin' Red	red	4½	7¼	1¾	3¾	*	*	*	*	*	*	*	*	*	yes	yes
Petunia	Ultra Pastel Pink	pastel pink w/rose overtones, cream throat	3	14	2	3½	*	*	*	*	*	*	*	*	*	no	yes
Phlox, Garden	21 st Century Blue Star	purple fading to lavender at edges	4	11	¾	1	*	*	*	*	*	*	*	*	*	yes	yes
Phlox, Garden	21 st Century Rose Star	rosy burgundy fading to pink at edges	3	6½	¾	1	*	*	*	*	*	*	*	*	*	yes	yes
Phlox, hybrid	Peppermint Candy	red, white, green striped	5	12	¼	½		*	*	*	*	*	*	*	*	no	no
Plectranthus	Silver Shield™	lavender	18	24	4 x 1	5 x 1		*	*	*	*	*	*	*	*	no	no
Portulaca	Margarita Peppermint	rosy pink w/dark pink flecks	2	11	½	1½	*	*	*	*	*	*	*	*	*	no	no
Portulaca	Margarita Scarlet	scarlet	3	10	1	1½	*	*	*	*	*	*	*	*	*	no	no
Rudbeckia	Autumn Colors	2-toned mahogany w/mahogany, centers, some yellow-tipped, yellow streaked petals	8	22½	2	4¼		*	*	*	*	*	*	*	*	no	yes
Rudbeckia	Double Gold	gold w/brown centers	15	27	¾	7		*	*	*	*	*	*	*	*	no	yes
Rudbeckia	Prairie Sun	gold fading to yellow at tips, green centers	18	35	1½	5¾		*	*	*	*	*	*	*	*	no	yes
Rudbeckia	Sonora	gold w/brown center ring, brown centers	17	36	4	5½		*	*	*	*	*	*	*	*	no	no
Rudbeckia	Spotlight	gold w/brown centers, brown spot on petals	4	9½	1½	3		*	*	*	*	*	*	*	*	no	yes
Safflower	Quadricolour	orange					*	*	*	*						no	no
Salvia	Blue Bedder	blue	21	38	¼x¼	14x1¼		*	*	*	*	*	*	*	*	yes	yes
Salvia	Picante Light Purple	2-toned lavender and purple	8½	15	2½ x 1½	5¼ x 2	*	*	*	*	*	*	*	*	*	no	no
Salvia (horminum)	Claryssa Mix	pink, purple bracts	14½	32	½x½	5x2	*	*	*	*	*	*	*	*	*	no	yes
Salvia (viridis)	Marble Arch Mix	pink, lavender, white bracts	5½	26	¾ x 1	5 x 2	*	*	*	*	*	*	*	*	*	no	yes
Salvia, Mealy-cup	Strata	silver and lavender bicolor	15	26	¾ x 1¼	4 x 1¼		*	*	*	*	*	*	*	*	yes	yes
Salvia, Mealy-cup	Victoria White	silvery white	14½	29	¾ x ¼	9 x 1½	*	*	*	*	*	*	*	*	*	yes	yes
Salvia, Mealy-cup	Gruppenblau	royal blue	20½	36	2 x ¼	7½ x ½	*	*	*	*	*	*	*	*	*	no	yes
Salvia, Scarlet	Blue Ribbon	lavender and white stripe	7	14	1 x ½	4 x 2¼	*	*	*	*	*	*	*	*	*	no	no
Salvia, Scarlet	Red Arrows	scarlet	8	19½	5 x 1½	9 x 2½	*	*	*	*	*	*	*	*	*	no	no
Scarlet Runner Bean		scarlet								*	*	*	*	*	*	no	no
Shasta Daisy	Alaska	white w/yellow centers	23	36½	¾	¾		*	*	*	*	*	*	*	*	no	yes
Shasta Daisy	Polaris	white w/yellow centers	22	29	¾	¾		*	*	*	*	*	*	*	*	yes	yes
Shasta Daisy	Silver Princess	white w/yellow centers	13	23½	¼	¾		*	*	*	*	*	*	*	*	no	yes
Shirley Poppy	Cedric Morris	pink, rose, white	12	15	1	2½	*	*	*	*						no	no
Shoo Fly Plant	Splash of Cream	lavender blue	19	28	¾	1¾		*	*	*	*	*	*	*	*	no	no
Snapdragon	Double Madame Butterfly Mixed	white, pink, rose, red, peach	14	24½	4 x 2½	7 x 3		*	*	*	*	*	*	*	*	yes	yes
Snapdragon	Frosted Sunset	pink w/yellow/orange throat	9	9	1½ x ½	7 x 2¼		*	*	*	*	*	*	*	*	yes	yes
Snapdragon	Madame Butterfly Mix	pink, yellow, rose, red, white	8	24	2½ x 2	7 x 3		*	*	*	*	*	*	*	*	yes	yes
Snapdragon	Solstice Hybrid Mix	orange, pink, white, yellow, rose, yellow/orange bicolor	3	12	2½ x 1¼	6 x 2½	*	*	*	*	*	*	*	*	*	yes	yes
Snapdragon	Sonnet White Improved	white	9	23½	2¼ x 1	10 x 2¼	*	*	*	*	*	*	*	*	*	yes	yes
Snapdragon	Freesong Pink	pink	6	18½	1½ x 2	6 x 2½	*	*	*	*	*	*	*	*	*	yes	yes
Snapdragon	Golden Monarch	yellow	5	25	5 x 2	10 x 3		*	*	*	*	*	*	*	*	yes	yes

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

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

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

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
4	4	4	4	yes			Spreads, excellent display all season, grow in raised bed, some deadheading late in season
2	2	2	2	no			Attractive abundant blooms but needs plenty of deadheading to keep from looking ragged
2	2	2	2	slight	yes		Individual plants grew well but many bare spots, did not seem to thrive, beautiful star pattern on petals
1	1	1	1	yes			Poor show this season, plants did not spread well, very nice flower color, might be best in containers
3	3	3	3	no	no	no	Compact mounds of striped flowers, filled in containers, Fleuroselect Quality Award winner
2	2	4	3				Extremely vigorous, the foliage was outstanding, the lavender flowers nothing to brag about
4	4	4	4	s	no	no	Excellent spread and blooms all season, grow in raised beds, needs a warm site, interesting flower color
4	4	4	4	no	no	no	Does not spread well, flowers close up in cool cloudy weather, rich flower color
2	2	2	2	no	yes	yes	Interesting mix of flower colors, flowers and foliage tolerate light frost, Fleuroselect Quality Award winner
3	3	4	3	no	yes	yes	Unusual double flowers, very attractive, some fully double, plants are stuffed with blooms
3	3	3	3	no	yes	yes	Abundant blooms, flowers and foliage tolerate light frost, interesting colors, All America selections flower award winner 2003, Fleuroselect Quality Award winner
3	3	3	3	no	yes	yes	Patterns on petals similar to 'Sputnik', reliable mid to late season blooms, flowers tolerate only light frosts
2	2	2	2	no	no	yes	Needs close spacing to fill in bed, dwarf rudbeckia
1	1	1	1	no			Grown as transplants, tiny scraggly stems died out early, colorful blooms early but mostly a poor show
3	3	3	3	no	yes	yes	Excellent salvia for backgrounds, fillers and cutting, large bushy plants covered with colorful spikes
2	2	2	2	no			Attractive lavender color but shorter clusters flowers than other salvias, needs close spacing for best cover
4	3	3	3	no	yes	yes	Poor seed germination, upright stems, better when planted as single color, i.e. 'Claryssa Pink'
4	4	4	4	no	yes	yes	Shorter than other salvias of this type, white-bracted plants perform poorly, give mix a ragged appearance
2	2	2	2	no	yes	yes	Interesting silver and lavender spikes, not as showy as solid colors, All America Selections flower award winner 1996
2	2	2	2	yes			Not as showy as the purple 'Victoria', okay as filler or companion plant
4	4	4	4	no	yes	yes	Excellent tall spikes of deep blue color, great background plant, excellent as cut flower
2	2	3	2	no	no		Attractive color, not many blooms, interesting stripe pattern on petals, flowers turn brown when old, needs deadheading
3	3	3	3	no	no	no	Tall bright red spikes of flowers, blooms well all season, needs some deadheading for best display, showy
				no	yes	no	Old standby used to compare other lesser known vines, great show of flowers and long bean pods
3	3	3	3	yes	yes		Still the best Shasta daisy, robust plants covered with blooms in mid season, excellent for cutting
3	3	3	3	no	yes	yes	One of the best Shasta types, excellent tall, straight stems for cutting, very large flowers
3	3	2	3	no	yes		Odd mixture of stem heights, ragged appearance, outstanding individual flowers and lots of them, tolerates light frost
							Plants bloomed early then died out, may not grow well as transplants
3	3	3	3	yes	yes	no	Few leaves had yellow specks, similar to the all-green species, will self sow
3	3	3	3	slight	yes		Excellent straight stems for cutting, very nice mix of colors, azalea (butterfly-type) petals, completely double
3	4	4	3	no	yes		Interesting two-toned flower color, medium sized snap, abundant blooms
3	3	3	3	no	yes		Ruffled butterfly petals, outstanding mix of colors, nice stems for cutting, very showy, tolerates only light frost
2	2	2	2	slight	yes	no	Attractive mix of colors, needs deadheading for best color
1	1	1	1	no	yes		Needs deadheading to extend bloom time, very nice uniform height and appearance
2	3	2	2	slight	yes		Straight upright flower stalks with abundant blooms, great for cutting
2	2	2	2	no	yes		Nice tall spikes of bright yellow blooms, not as floriferous as other snaps, great for cutting, needs some deadheading

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

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
3	3	3	3	yes	yes		Beautiful clear yellow butterfly-type blooms on tall stalks, great for cutting, solid masses of color
3	3	3	3	no			Excellent mix of flower colors, nice straight tall stems for cutting
4	4	3	4	no	no	no	Abundant mass of color early, attractive bicolor flowers, needs deadheading, dwarf snapdragon
4	4	4	4	slight			Tiny daisies with abundant needle-like petals, mounds of thin tangled stems and leaves topped with a mass of flowers
2	3	3	3	no	no		Very unusual, looks like eyeballs on a stick, red stems and reddish foliage, unusual conversation piece
3	3	3	3	no	yes	yes	Very nice mix of pastel shades, good strong stems for cutting, vibrant colors
3	4	4	3	yes	yes	yes	Lots of blooms, great for cutting or drying, flowers and foliage tolerate only light frost
2	2	2	2	yes	yes		Some double, mostly single flowers, very nice mix of colors and great contrast with silvery foliage
1	1	1	1	no	yes		Unusual double petals, quite showy early in season but finished by mid season, first dwarf red sunflower, matured seeds
2	2	1	2	no	yes		Short plant completed blooms early, matured seeds, attracted squirrels, recommended for use as a short hedge
2	2	2	2	slight	yes		Unusual petal color, pollen free
3	3	3	3	no	yes		Multi-flowering, branching plant with burgundy stems, small heads that lean downward, nice short sunflower
3	3	3	3	no	yes		Some double blooms, extremely variable flower size, pollen free, strong stems for cutting
3	3	3	3	no	yes		Tall background plant, small flowers on multiple branching stems, good mixed with larger flowering sunflowers, pollen free
2	2	2	2	no	yes	no	Single, semi-double and double flowers, pollen free, ragged appearance late in season, showed some Sclerotinia rot
4	4	4	4	no	yes		Best sunflower, excellent heads packed with petals in solid mound, the most “asked about” sunflower
3	3	3	3	no	yes	yes	Single-headed medium-height with interesting green centers
3	3	3	3	slight	yes		Bushy multiple branching flower stalks with medium-sized flowers, blooms well from mid July onward, pollen free
3	3	3	3	yes	yes		Straight, tall stems with good mix of colors
2	2	2	2	no	yes		Attractive color, medium-sized plants topped with clusters of tiny flowers, good filler or accent for edging
4	4	4	4	yes	yes		Fragrant, dwarf sweet pea covered with blooms, excellent color mix, great grown as edging with taller sweet peas
3	3	3	3	slight	yes		Reliable tall sweet pea covered in blooms, extremely fragrant
4	4	4	4	yes	yes		Short sweet pea covered in fragrant blooms, excellent cut flower
4	4	4	4	slight	yes		Tallest of the sweet peas this year—outgrew the trellis, excellent color mix with abundant flowers
3	3	3	3	slight	yes		Very good flower mix and fragrance, good cut flower
2	2	1	2	yes	yes	yes	Billowy mounds of color, floppy stems but covered with blooms
1	1	1	1	no	yes		Small abundant daisy flowers with attractive contrasting centers
4	4	4	4	yes	yes		Small flower clusters, needs deadheading, outstanding display in this warm summer, very attractive color with eye
2	3	2	2	no	yes		Needs deadheading, masses of flowers that contrast well with dark green foliage, great late-season garden extender
3	3	3	3	no	yes	no	Better cultivars are available, plants lacked the fullness of blooms and great show of other verbenas
3	3	3	3	yes	yes		Spreading branches covered with blooms, very attractive display all season, needs deadheading for best display
2	2	2	2	yes	yes		Small clusters of billowy flowers, plants covered with blooms, nice display all season, tolerates only light frost
3	3	3	3	slight	yes		Fills in well and blooms well all season, mounds are covered with color all season, no maintenance needed
							Grown in containers in the shade garden, did not grow well despite high temperatures
2	2	2	2	no	yes	yes	Excellent two-toned blooms with uniform violet color, abundant blooms on mounding plants, no maintenance
4	4	4	4	yes	yes	yes	Artistic flower patterns, appears hand painted, tolerates only light frost
3	3	3	3	yes	yes	yes	Huge mounds of light orange flowers, excellent show all season, some deadheading late in season
3	3	3	3	yes	yes	yes	Mountains of tiny flowers cover the foliage, very attractive, no maintenance, great color all season

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

Table 3. Results of tested annual flower cultivars for 2004, cont.

Common name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y				Frost tolerance					
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers				
Viola	Sorbet Orange Duet	light orange/purple bicolor	3½	11	¾	1½	*	*	*	*	*	*	*	*	yes	yes
Wildflower Mix	Sunburst Ground Cover	mixed	4	24½	½	2¾				*	*	*	*	*	no	yes
Zinnia (angustifolia)	Tropic Snow	white w/yellow centers	5	20½	½	1¾			*	*	*	*	*	*	no	no
Zinnia, Garden	Bright Jewels Mixture	magenta, white, pink, rose	8	33	2¼	4¾	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Carrousel Mix	yellow/red, pink, coral, orange, apricot	7½	32	1¼	4	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Envy	greenish yellow	23	35	2	3¼	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Pink Ruffles	rose and pink w/yellow centers					*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Purple Dahlia	magenta	17	30	2¼	4	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Zinnita Mix	orange, rose, white, red, yellow	5	19	1	2¼	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Short Stuff Gold	gold	5	15	1¾	3⅞	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Swizzle Cherry & Ivory	cherry red w/creamy white tips	16	36	1½	3½	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Zig Zag	pink, rose, scarlet, yellow, orange, cream solids and bicolors	12	41	1½	3¼	*	*	*	*	*	*	*	*	no	no
Zinnia, Garden	Magellan Coral	coral pink	12	15	3	4	*	*	*	*	*	*	*	*	no	no
Zinnia, Mexican	Chippendale Daisy	orange and mahogany mixed patterns	10	28	¾	2		*	*	*	*	*	*	*	no	no

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ABOUT THE AGRICULTURAL AND FORESTRY EXPERIMENT STATION: The federal Hatch Act of 1887 authorized establishment of agricultural experiment station in the U.S. and its territories to provide science-based research information to farmers. There are agricultural experiment stations in each of the 50 states, Puerto Rico, and Guam. All are part of the land-grant college system. The Morrill Act established the land-grant colleges in 1862. While the experiment stations perform agricultural research, the land-grant colleges provide education in the science and economics of agriculture.

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

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

The first experiment station in Alaska was established in Sitka in 1898. Subsequent stations were opened at Kodiak, Kenai, Rampart, Copper Center, Fairbanks, and Matanuska. The latter two remain. None were originally part of the Alaska land-grant system. The Alaska Agricultural College and School of Mines was established by the Morrill Act in 1922. It became the university of Alaska in 1935. The Fairbanks and Matanuska stations now form the Agricultural and Forestry Experiment Station of the University of Alaska Fairbanks, which also includes the Palmer Research Center.

Early experiment 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. Change has been constant as the station continues to bring state-of-the-art research information to its clientele.

Plant ratings ^z				Recommended for			Comments
Flower		Foliage	Overall	Fragrance	Cutting	Drying	
quantity	quality						
2	2	2	2	no	yes	yes	Attractive unusual bicolor flowers, older flowers fade, huge mounds of flowers, no maintenance, Fleuroselect Gold Medal winner 2003
4	4	4	4	no	yes		Cultivars rather than wildflowers, does not exceed 12 inches in height with a spreading, mounding growth form, spectacular color from July through frost, greatest color from California poppies
2	2	2	2	no	yes		Performed better than in 2003, but still not the best angustifolia-type zinnia, lots of foliage, few flowers
4	4	4	4	slight	yes	yes	Some diseased foliage, whites are ratty in cold weather, uneven height, odd flower shapes, nothing special
2	2	2	2	no	yes	yes	Tall upright stems with small flowers in a mix of colors, not the best show in zinnias, more foliage than color
1	1	1	1	no	yes	yes	Unusual greenish color, excellent contrast with dark green foliage, straight upright stems, works well with purple flowers
				no	yes	yes	Small compact flowers, needs closer spacing for full blooms in mass plantings
3	3	3	3	no	yes	yes	Sparse but large flowers, interesting flower color, catalog description record 3-5 ft height, hardly
4	4	4	4	no	no	yes	Small flowers cover compact bushy plants, the color mix is excellent, needs close spacing and warmest part of garden
3	3	4	3	no	yes	yes	Compact flowers with uniform gold color, needs close spacing for full cover, bloomed well in this hot summer
2	3	3	3	no	yes	yes	Interesting bicolor flowers on bushy upright plants, not the most floriferous of zinnias
3	3	3	3	slight	yes	yes	Abundant small blooms on tall upright stems, vibrant mix of colors
3	3	3	3	no	yes	yes	Outstanding solid coral color on fully double flowers, very attractive in mass plantings
4	4	4	4	no	yes	yes	Abundant small flowers cover this plant, excellent color nearly all season, great filler or accent plant

Acknowledgements

Without our dedicated volunteers, continued growth and success of the Georgeson Botanical Garden would not be possible. A big thank you to our 2004 volunteers!

To join these valued few, call Jan Hanscom at 474-6921

BSA Troop 10: Bob Van Veldhuizen, Jake Van Veldhuizen, Matt Van Veldhuizen, Richard Gorsline, Robert Gorsline, Loni Gorsline, Paul Layer, Mark Layer, Josh Frisby, John Lee, David Durst, Mrs. Angaiak's second grade, Mrs. Lee's second grade, Ms. Harrison's second grade, Kay Barbaza, Dan Baum, Kathy Baum, Nancy Bigelow, Cathi Bouton, Janet Bowles, Peggy Buss, Jane Campbell, Jean Coghill, Barbara Colburn, Sharon Corbett, Virginia Damron, Susan Dearborn, Donna Dinsmore, Rae Dinsmore, Dena Doublex, Cathy Drury, Catherine Eagan, Sue Englebrecht, Carl Eschright, Barbara Fay, Wanda Fields, Luana Gallo, Etta Gardiner, LuJuan Gibson, Shirley Harris, Kate Hedstrom, Victoria Hill, Lynn Hoffman, Marian Hoffman, Helen Howard, Hillary Huffman, Alex Jacobson, Petra Jennen, Karen Jensen, Ted Kegler, Nancy Klammer, Joanne Klumb, Cindy Lewis, Sherry Lewis, Susan Lightbody, Suzi Lozo, Brahm Lower, Elizabeth Lower, Kathy MacDonald, Ann MacIntyre, Sandy Mattie, Rose Meier, Katherine Morin, Marsha Munsell, Arlie Nethken, Carolyn Nethken, Deb Neumayr, Peggy O'Neal, Irene Peyton, Leonard Peyton, Joanna Phillips, Emily Reiter, Barbara Rondine, Ann Roberts, Betsy Robertson, Heather Robertson, Nanacy Roehl, Lou Rowinski, Kathy Seim, Barbara Sevier, Ann Sherman, Molly Sherman, June Siegrist, Libby Silberling, Melody Springer, Shirley Sterner, Tommie Sterner, Ann Swift, Sarah Thornton, Eileen VanWyhe, Judy Weber, Susan Willsrud, Buffy York-Dewitz, Susie Zimmerman

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Table 4 Results on cultivars completed three years testing.

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
African Lion's Tail		3		3	49	62	2.8	3.2	3	2
Agastache	Apricot Sprite	2		2	8	22	2.8 x 1	8.5 x 2.5	2	2
Agastache	Golden Jubilee	3		2	11	22	2 x 2	3.5 x 2	2	3
Alyssum, Sweet	Wonderland Lavender	3		3	1	4	0.2	0.7	3	3
Asclepias	Ice Ballet	2		2	24	30	0.8	1.1	2	1
Aster, Annual Garden	Astoria Deep Blue	3		3	16	25	1.5	2.9	3	4
Aster, Annual Garden	Compliment Yellow	3		2	14	28	2.7	4.0	3	3
Aster, China	Lilliput Blue Moon	3	5.0	3	9	24	0.9	2.4	3	3
Blue woodruff		3	3.0	2	4	13	0.3	0.8	3	3
Calendula	Flashback	3	5.3	3	11	24	1.1	2.1	3	3
Calendula	Geisha Girl	3	7.3	3	15	28	1.0	3.0	3	3
Cardinal Climber		1		1	15	31	0.7	1.0	1	1
Chinese Forget-me-not	Mystery Rose	3	6.0	3	12	23	4 x 3	7 x 3.5	4	3
Chrysanthemum	Polar Star	3		3	12	29	1.8	3.5	3	3
Chrysanthemum multicaule	Yellow Buttons	3		3	4	17	0.4	1.2	3	3
Cleome	Solo	1		2	11	18	1.5 x 1.5	3 x 1.8	1	2
Coneflower, Branched	Ace of Spades	1	10.7	2	16	20	0.8	1.0	1	1
Coreopsis	Mardi Gras	3		3	9	17	1.8	1.4	3	3
Coreopsis	Seashells	3		3	10	22	0.9	1.5	3	3
Cosmos	Campus Apricot	2		2	10	16	1.0	1.7	2	1
Cosmos	Candy Stripe	2		2	18	31	1.4	2.8	2	2
Cosmos	Daydream	2		3	17	24	1.1	1.6	2	2
Dahlberg Daisy		3	2.7	3	4	10	0.3	0.9	3	4
Dahlia	Harlequin Mixed Colors	3	4.7	3	9	25	2.2	3.6	3	3
Gaillardia	Sundance Bicolor	3	4.3	3	10	18	1.0	2.4	2	3
Gazania	Daybreak Orange Cream	3	1.7	3	7	12	2.4	3.5	3	3
Gazania	Sunshine	3		3	7	16	2.2	3.8	3	3
Gazania	Tiger Mix	3		3	9	12	2.3	3.2	3	3
Impatiens, Garden	Dazzler Star Mix	2		2	2	7	0.8	1.4	2	2
Impatiens, Garden	Double Fanciful Coral	2		2	1	10	0.7	1.0	2	2
Impatiens, Garden	Fanciful Orchid Rose	2		2	4	10	0.3	1.0	2	2
Impatiens, Garden	Super Elfin Red Improved	2		2	2	7	1.3	1.8	2	2
Impatiens, Garden	Super Elfin Ruby	3		3	4	6	1.3	1.5	3	3
Impatiens, Garden	Swirl Coral Improved	2		2	1	7	0.8	1.0	2	2
Lavatera	Easter Parade	1		1	8	15	0.9	2.2	1	1
Lavatera	Ruby Regis	3	9.7	3	7	21	1.9	3.3	3	3
Love-in-a-mist	Miss Jekyll Blue	2	7.0	2	10	18	1.0	1.5	2	2
Marigold, African	Gold n' Vanilla	3		3	5	17	1.5	3.9	3	3
Marigold, African	Inca II Primrose	4		4	5	13	2.1	4.3	4	4
Marigold, African	Pesche's Gold	3	5.5	3	12	23	1.0	2.8	3	3
Marigold, French	China Cat Mix	4		4	8	35	1.3	2.7	4	4
Marigold, French	Durango Bolero	3		3	6	11	1.7	2.8	3	3
Marigold, French	Durango Red	3		3	8	15	1.9	2.8	3	3

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

Table 4 Results on cultivars completed three years testing, cont.

Name	Cultivar	Ave. ^z Overall Rating	Ave. Foliage ht (in)	Ave. ^z Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ^z Flower Quality	Ave. ^z Flower Quantity
Marigold, French	Durango Yellow Improved	3		3	3	14	1.4	3.0	3	3
Marigold, French	Honeycomb	4		3	4	14	1.3	2.3	4	4
Marigold, Signet	Luna Yellow	3		3	4	18	0.4	1.0	3	3
Mimulus	Mystic Mix	3		2	3	7	1.2	1.8	3	3
Nasturtium	Alaska Salmon Orange	3		3	10	22	1.8	2.8	2	3
Nasturtium	Peach Melba Superior Wina	2		2	6	13	1.3	1.8	2	2
Nemesia	Blue and White	3	2.3	2	4	12	0.3	0.4	3	3
Nicotiana, Alata	Lime Green	3		3	12	26	2.5 x 2.3	5 x 4.5	3	3
Nicotiana, Langsdorfii	Langsdorfii	3		2	13	28			3	3
Pansy	Luna	3	3.7	3	4	14	1.2	2.7	3	3
Pansy	Pandora's Box	3		3	3	15	1.1	2.1	3	3
Pansy	Ultima Morpho	4	5.7	4	4	11	1.4	1.7	4	4
Petunia	Blue Wave	4		4	2	14	1.4	2.3	4	4
Petunia	Dreams Mix Patriot	3		3	4	14	1.8	3.2	3	3
Petunia	Frillytunia Rose	3		3	5	13	1.8	2.8	3	3
Petunia	Merlin Blue Morn	2	5.0	2	4	11	1.0	1.9	2	2
Petunia	Old Glory	3		3	4	14	1.5	2.9	3	3
Petunia	Wave Lavender	3		3	2	9	1.6	2.6	3	3
Petunia	Yellow Magic	3	3.3	3	5	19	2.1	2.9	3	3
Rudbeckia	Double Gold	3		3	13	31	3.6	6.0	3	3
Rudbeckia	Prairie Sun	3		3	15	30	2.4	6.2	3	3
Rudbeckia	Sonora	3		3	14	29	3.2	5.2	3	3
Rudbeckia	Spotlight	2	2.7	2	4	9	1.3	3.3	2	3
Salvia	Blue Bedder	1	8.0	1	10	22	.5 x .3	13 x 1	1	1
Salvia (horminum)	Claryssa Mix	3	9.0	3	12	24	2 x 1	4 x 2.5	3	3
Salvia (viridis)	Marble Arch Mix	3		4	8	22	2 x 1.5	4 x 2	3	3
Salvia, Scarlet	Blue Ribbon	3		3	7	13	1.3 x 1	4.5 x 2.3	3	3
Shasta Daisy	Alaska	4	6.3	4	18	34	1.9	3.8	4	3
Shasta Daisy	Polaris	2		2	14	20	2.3	3.3	2	2
Shasta Daisy	Silver Princess	3		2	12	27	1.9	4.2	3	3
Snapdragon	Frosted Sunset	3	4.0	3	10	14	1.5 x 1	6 x 2.5	3	3
Snapdragon	Madame Butterfly Mix	3	7.0	3	11	24	3 x 2	7 x 3	3	3
Snapdragon	Solstice Hybrid Mix	3		3	7	14	2.5 x 2	7 x 2.5	3	3
Snapdragon	Sonnet White Improved	2		2	9	22	3 x 2	11 x 2.8	2	2
Spilanthes, Eyeball Plant	Peek-A-Boo	3		3	6	14	0.4	0.7	3	3
Statice	Pastel Shades Mix	3	6.3	3	10	28	0.3	7.8	3	3
Sweet Mace		3	3.3	3	5	12	0.3	1.3	3	3
Tidy-tips		3	3.7	2	8	22	0.8	1.5	3	3
Verbena, Garden	Quartz Rose	3		3	3	13	0.9	1.5	3	3
Verbena, Rose	Perfecta	3		3	3	17	0.8	2.0	3	3
Zinnia, Garden	Bright Jewels Mixture	3	3.7	3	9	25	2.5	4.3	3	3
Zinnia, Garden	Pink Ruffles	2		2	7	16	0.8	1.8	2	2
Zinnia, Garden	Purple Dahlia	2		3	11	25	2.3	3.8	2	2
Zinnia, Mexican	Chippendale Daisy	4		4	8	21	0.8	2.3	4	4

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

List of seed and plant sources for all trials:

Alaska Greenhouse, 1301 Muldoon Rd., Anchorage AK 99514
*Alaska Native Plant Society, PO Box 141613, Anchorage AK 99514
Alberta Nurseries & Seeds Ltd., PO Box 20, Bowden AB TOM 0K0 Canada
Alplains, 32315 Pine Crest Court PO Box 489, Kiowa CO 80117
*American Rock Garden Society, PO Box 67, Millwood NY 10546
*American Horticultural Society, PO Box 6118, Alexandria VA 22308
Applewood Seed Co., 5380 Vivian St, Aruada CO 80002
B&D Lilies, PO Box 2007, Port Townsend WA 98368
Bear Creek Nursery, PO Box 411, Northport WA 99157
Better Trees, Inc., 7894 W Maple Rapids Rd, St. Johns MI 48879
Bluebird Nursery, Inc., PO Box 460, Clarkson NE 68629
Carolina Seeds, PO Box 2658 Hwy 105 Bypass, Boone NC 28607
Clair's Cultivations, 1364 Esro Rd, Fairbanks AK 99712
Clause Seed, 100 Breen Rd, San Juan Bautista CA 95045
Connell's Dahlias, 10616 Waller Rd E, Tacoma WA 98446
Cook's Garden, PO Box 535, Londonderry VT 05148
Daehnfeldt, PO Box 947, Albany OR 97321
de Jager Bulb Co., PO Box 2010, So. Hamilton MA 01982
Denali Seed, PO Box 111425, Anchorage AK 99511
Dinkel's Fairview Nursery, HC 31 PO Box 5193, Wasilla AK 99687
Dutch Gardens, Inc., PO Box 2037, Lakewood, NJ 08701
EuroAmerican Propagators, PO Box 289, Bonsall CA 92003
Farmer Seed & Nursery Co., 818 NW 4th St, Fairbault MN 55021
F.W. Schumacher Co., Inc., 36 Spring Hill Rd, Sandwich MA 02563
Fred C. Gloeckner & Co., Inc., 15 E 26th St, New York NY 10010
Gardens North, 5984 Third Line Rd North, North Gower ON K0A 2T0 Canada
Germania Seed Co., 5978 N Northwest Hwy, Chicago IL 60631
Gilbert H. Wild & Sons, PO Box 338, Sarcoxie MO 64862
Guerney Seed & Nursery Co., 110 Capital St, Yankton SD 57079
H.G. German Seeds, Inc., PO Box 398, Smethport PA 16749
Hawk's Farm & Garden Center, PO Box 55759, North Pole AK 99705
Henry Field's Seed and Nursery Co., 415 N Burnett, Shenandoah IA 51602
Holm Town Nursery, PO Box 71565, Fairbanks AK 99707
Hortico, Inc., 723 Robson Rd R.R.#1, Waterdown ON LOR 2H1 Canada
Ion Exchange, 1878 Old Mission Dr, Harper's Ferry IA 52146
Irish Eyes & Garden City Seeds, PO Box 307, Thorp WA 98946
J.L. Hudson, PO Box 1058H, Redwood City CA 94064
Jackson & Perkins, PO Box 1028, Medford OR 97501
K. Van Bourgondien & Sons, Inc., PO Box 1000, Babylon NY 11702
Lamb Nurseries, 101 E Sharp Ave, Spokane WA 99202

Lawyer Nursery, 950 Highway 200 W, Plains MT 59859
Liberty Seed Co., PO Box 806, New Philadelphia OH 44663
McClure & Zimmerman, PO Box 368, Friesland WI 53935
Mountain Seed & Nursery, PO Box 271 Rte 1, Moscow ID 83843
*New England Wildflower Society, 180 Hemenway Rd, Framingham MA 01701
Nichols Garden Nursery, 1190 North Pacific Hwy, Albany OR 97321
Nourse Farms, Inc., PO Box 485 R.F.D., South Deerfield MA 01373
Otis S. Twilley Seed Co., Inc., PO Box 65, Trevoise PA 19053
Peter de Jaeger Bulb Co., PO Box 2010, So. Hamilton MA 01980
Pinetree Garden Seeds, PO Box 300, New Gloucester ME 04260
Richters, 357 Highway 47, Goodwood On LOC 1A0 Canada
Roseraie at Bayfields, PO Box R, Waldoboro ME 04572
Royal Sluis, Inc., 1293 Harkins Rd, Salinas CA 93901
Rupp Seeds, Inc., 17919 County Rd B, Wauseon OH 43567
Seeds of Alaska, PO Box 3127, Kenai AK 99611
Seeds of Change, PO Box 15700, Santa Fe NM 87501
Seeds of Distinction, PO Box 86 Station A, Toronto ON M9C 4V2 Canada
Seedway, Inc., PO Box 250, Hall NY 14463
Select Seeds, 180 Stickney Hill Rd, Union CT 06076
Seymour's Selected Seeds, PO Box 1346, Randolph WI 53956
Shepherd's Garden Seeds, 30 Irene St, Torrington CT 06790
Smith Nursery Co., PO Box 515, Charles City IA 50616
T & T Seeds, Ltd., PO Box 1710, Winnipeg MB R3C 3P6 Canada
Territorial Seed Co., PO Box 157, Cottage Grove OR 97424
Valley Nursery, PO 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
Vermont Wildflower Farm, PO Box 1400, Louisiana MO 63353-8400
Vesey's Seeds, Ltd., PO Box 9000, Calais, ME 04619-6102
W. Atlee Burpee & Co., 300 Park Ave, Warminster PA 18991
Washburn Farm Nursery, PO Box 823, Palmer AK 99645
Wauhara Gardens, N 5491 5th Dr, Plainfield WI 54966
Wayside Gardens, 1 Garden Ln, Hodges SC 29695
White Flower Farm, PO Box 50, Litchfield CT 06759
Wild Rose Gardens, PO Box 82281, Fairbanks AK 99708
Wildseed, Inc., PO Box 308, Eagle Lake TX 77434
Wildwood Northern Seeds, Whitehorse YT Canada
William Dam Seeds, PO Box 8400, Dundas ON L9H 6M1 Canada
*Seeds available to members through seed exchange programs

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