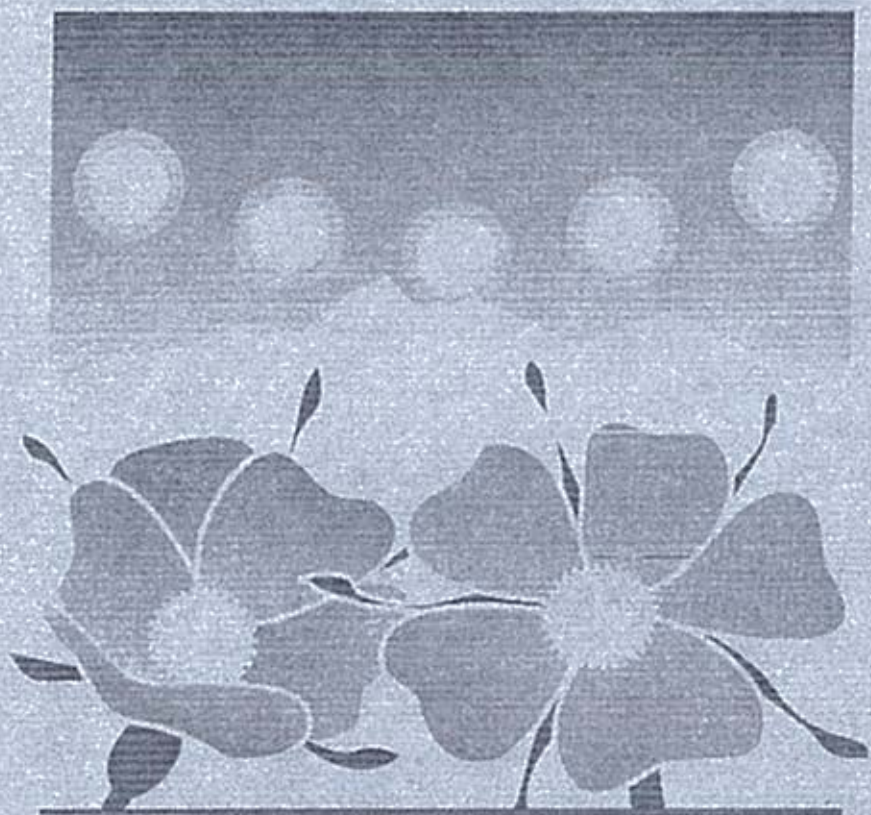


Annual Flowering Plant Evaluations 2001



GEORGESON
BOTANICAL GARDEN

by
Patricia S. Holloway
Associate Professor of Horticulture

Eileen Van Wyhe
Garden Volunteer

Victoria Hill
Garden Volunteer

Jan Hanscom
Horticulturist

Grant E. M. Matheke
Horticulturist

UAF UNIVERSITY OF ALASKA
FAIRBANKS

Agricultural and Forestry Experiment Station
School of Agriculture and Land Resources Management

Circular 121

November 2001

Introduction

Each year approximately 300 annual flowering plants are included in the tests at the Georgeson Botanical Garden. Each cultivar is tested for three years before being replaced by a new cultivar. Averaged results for those cultivars being replaced after 2001 are available in Table 4.

The annual flower trials were planted from 4 June through 6 June, 2001 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 1 June. Flowers were grown as seedling transplants and were hardened off outdoors for one week prior to transplanting.

All cultivars were planted according to recommended commercial spacing guide lines in unreplicated beds. Plant numbers varied according to plot size. The granular herbicide Preen® (Trifluralin), was applied on 10 June to all plots. Plots were irrigated as needed throughout the summer. A fungicide treatment (Topsin M®), Thiophanate-methyl) was applied on 12 June and 20 July to inhibit the growth of *Sclerotinia* cottony rot.

Plot evaluations began immediately after planting and continued weekly through September. They consisted of flowering dates and occurrence of disease, insect pests, seed pods, off-type plants, and other deformities. From 25 July to 15 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 24 September.

Weather data were compiled annually from a U.S. weather service station, elevation 475ft (145m), located approximately 350ft (107m) west of the Garden. The last spring frost was 13 May (30°F, -1.1°C). The growing season was fairly typical for Fairbanks (Table 1). The thaw degree day accumulation was above the previous ten-year average of 3240 degree days as was the frost free season of 134 days compared to the previous ten year average of 102 days. A typical late summer and autumn in Fairbanks is a gradual decline in temperatures and an increase in rain and cloudy days. In late August or early September, a killing frost occurs that signals the end of the season followed by mild September days and frosty nights. This season, as well as 2000, the first frost (32°F, 0°C or lower) was not recorded until the latter half of September, effectively extending the season by 2-3 weeks. All except the most sensitive plants were still blooming through the last week of September making for an extra month of gardening enjoyment.

Table 1. Previous ten year weather data plus 2001

Season	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Average temperature:											
May	48.9	40.6	51.9	52.0	52.3	44.1	47.8	49	46	44	45
June	60.8	59.1	60.5	57.0	58.5	57.3	61.0	57.8	61	59	56.5
July	59.7	63.0	64.5	62.0	61.9	61.9	63.8	62.2	61	59	60.5
Aug	53.0	55.9	55.5	51.0	55.6	52.1	57.1	52.4	57.5	51.5	57
Sept.	47.9	31.4	42.5	43.0	50.6	41.2	49.6	45.8	45	41	48.5
Maximum temperature	93	90	91	89	85	82	87	87	91	83	95
Growing season:											
Last frost	May 16	June 7	May 1	May 6	May 22	June 5	May 25	May 13	May 29	May 15	May 13
First frost	Aug 27	Sep 5	Sept. 1	Aug 23	Sep 4	Aug 27	Aug 19	Sept. 13	Sep 11	Sep 16	Sep 24
Frost free days	103	90	123	109	105	83	86	123	105	124	134
Thaw degree days	3069.0	2568.0	3547.5	3476.3	3676.5	2810.5	3655.5	3277.5	3383	2943	3439
Rainfall	6.28	8.78	6.67	7.21	10.15	8.73	5.86	9.87	8.66	8.55	5.80
Previous winter season:											
Minimum temperature	-49	-35	-52	-37	-48	-48	-54	-48	-54	-50	-27
Snowfall	131.6	103.8	131.7	36.3	69	47.8	8.4	30.6	31.6	62.2	39.9

Table 2. Weather Data for 1999 - 2001

Weather Variable	May			June			July			August			September		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Average, daily max. °F	58	55	55	73	73	64	72	69	70	69	60	67	56	50	61
Monthly high temp. °F	70	64	69	91	83	95	85	81	82	87	79	77	68	56	68
Average daily min. °F	34	33	35	49	45	49	50	48	51	46	43	47	34	32	36
Monthly low temp. °F	28	21	20	35	39	41	41	37	40	33	35	40	16	16	29
Rainfall (inches)	0.32	0.81	0.03	2.12	0.92	0.41	2.06	2.03	3.35	1.89	3.33	1.70	2.27	1.46	0.31

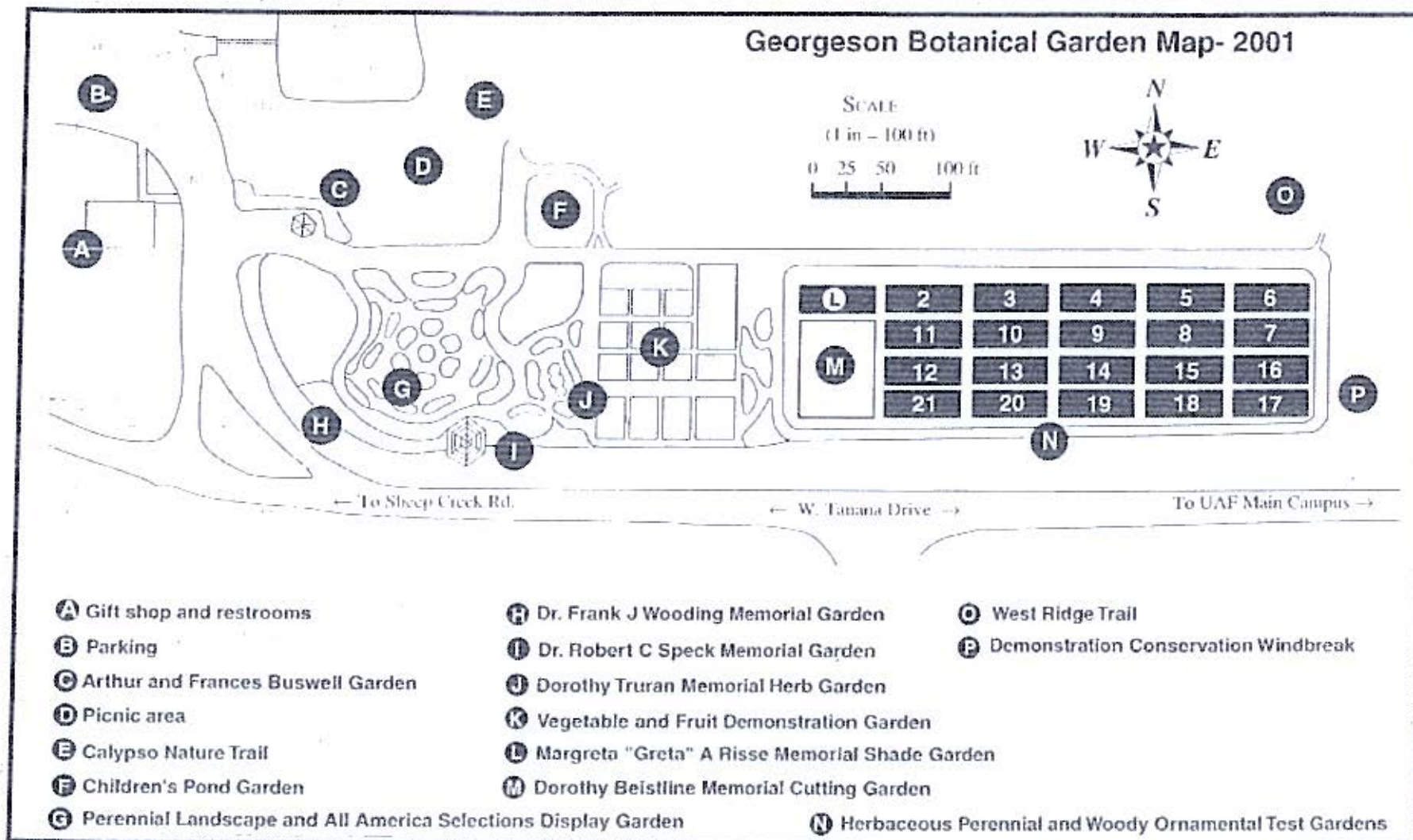


Table 1. Results of tested cultivars for 2001.

Name	Cultivar	Flower color	Height (in.)		Flower size (in.)*		Flowering period†				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Ageratum	Blue Bouquet	lavender blue	3	33	¼	½	***	***	***	***	***	-	-
Ageratum	Blue Horizon	lavender	5½	19	¼	½	**	**	**	**	**	-	-
Ageratum	Blue Mink	lavender blue	1	9	¼	½	***	***	***	***	***	-	-
Ageratum	Hawaii Shell Pink	pink, rose	1½	5½	¼	½	**	**	**	**	**	-	-
Ageratum	Red Sea	reddish purple buds opening to lavender	10	16	¼	¾	**	**	**	**	**	-	-
Ageratum	Southern Cross	light lavender blue	5	10½	¼	¾		**	**	**	**	-	-
Ageratum	Weisser Schnitt	white	4½	27½	¼	½		**	**	**	**	-	-
Ageratum	Goldrush	gold	2	13	¼	½	**	**	**	**	**	+	+
(Lonas) Alstroemeria	Jazze Rose Frost		10	16	2	3½	**	**	**	**	**	+	+
Alyssum	Aphrodite Mix	purple, rosy purple, cream, white	1	6½	¼	¼	**	**	**	**	**	-	-
Alyssum	Easter Bonnet White	white	1	4½	¼	¼	**	**	**	**	**	-	-
Alyssum	New Apricot	apricot	1½	4½	¼	¼	**	**	**	**	**	-	-
Asclepias	Red Butterfly	orange and yellow	6½	16	½	¾		**	**	**	**	+	+
Aster	Pompon Splendid Mixed	rose, purple, purple with white centers	12	25	1½	3		**	**	**	**	-	-
Aster	Riviera Mixed	purple, pink, rose, lavender, white, yellow	18	29	3½	5		**	**	**	**	-	-
Aster, Annual	Single California Giant Finest Mixed	pink, purple with yellow centers	13½	31	4½	2½		**	**	**	**	-	-
Aster, Annual	Tiger Paws Mixed	red, purple, burgundy, pink, yellow, white	7	28½	1¼	5¼		**	**	**	**	-	-
Bells of Ireland													
Brachyscome	Bravo Formula Mix	blue, white, purple, pale blue with black or yellow centers	4½	14	½	1½	**	**	**	**	**	-	-
Calendula	Green Heart Orange	yellow-orange with orange centers	18	28½	2	3½	**	**	**	**	**	+	+

* If the plant is uniform in height, the height is recorded under max only.

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

‡ * indicates less than full bloom and ☆ indicates full bloom.

Plant ratings¹

Flower quantity quality Foliage Overall Recommended for Growth habit Fragrance Cutting Drying Comments

Flower quantity	quality	Foliage	Overall	Growth habit	Fragrance	Cutting	Drying	Comments
4	3	3	3		n	y	y	Tall, erect stems excellent for cutting, small flower clusters, holds up well in cold, wet weather, large bushy plants
3	3	3	3	Upright, ascending	y	y	y	Uneven flower height, brown centers develop in rainy weather, excellent color
4	4	3	4		n		y	Variable plant height but still attractive, excellent color, some brown centers after cold, wet weather, nice short carpet
3	2	3	3	Compact mounding	y	n		Interesting bicolor appearance, buds are dark rose pink, flowers fade to white, lots of brown centers after cold, wet weather, needs close spacing for best carpet effect
3	3	3	3	Upright, ascending	n	y	y	Outstanding color contrast new buds are a dark reddish purple, color becomes lavender in full bloom, variable flower height
3	3	3	3		n	y		Compact plants, flowers are interesting two-tone color as they mature, forms brown centers in rainy weather, uneven plant height
4	3	3	3		n	y		Variable height, nice contrast of white flowers against green foliage, excellent bushy growth, covered with flowers, holds up well after cold, wet weather
3	3	3	3		n	n		Very attractive jewel-like flowers, looks like tiny gold pin cushions, sparse in June, needs close spacing for best cover
3	4	3	3	Upright, ascending	n	y		Outstanding container flower, bloomed all summer, long-lasting blooms, excellent growth from seed, grew well in sun or shade, colors a bit faded in full sun
3	3	3	3	Compact mounding	y	n		Holds up well in cold, wet weather, the purple colored plants are more vigorous than other colors
4	4	4	4		y			Nice white carpet, some decline due to wet weather, variable flower height
3	3	3	3	Compact mounding	y			Excellent color, works well with salmon-colored flowers, performs well in cold, wet weather
3	3	4	3		n	y		Excellent cover, nice foliage, sparse flowers, great contrast between flowers and foliage
3	3	3	3	Upright, ascending	n	y		Blooms late but worth the wait, outstanding tight flower heads look like mums, looks ragged after prolonged wet weather
3	3	3	3	Upright, ascending	n	y		Outstanding late season color mix, late to bloom but worth the wait, yellow centers as flowers mature, petals become discolored and ragged in rainy weather
3	3	3	3	Upright, ascending	n	y		Nice daisy-like flowers excellent for cutting, petals become curled and splotchy following cold rains
3	4	4	4		n	y		Excellent, full blooms, highly recommended for cutting, big poufs of petals opening to yellow centers, needs deadheading after cold, wet weather, interspecies cross between spider asters and giant Crego types No growth to speak of this year, no blooms
3	4	4	4	Compact mounding	sl	n		Uneven mounds, each plant color a different size, brilliant colors
4	3	3	3		n	y		Needs deadheading, bright flowers, lime green center not prominent

5

¹ 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.

Name	Cultivar	Flower color	Height (in) ¹		Flower size (in) ²		Flowering period ³				Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers
California Poppy	Buttermilk	creamy yellow	5	18	1	2½	***	***	***	***	-	-
California Poppy	Chaupagne & Roses	dark rose outside, rose, light pink, creamy yellow inside, some all yellow	3	13	1	2	***	***	***	***	-	-
California Poppy	Purple Glean	rose with creamy yellow centers	5	18	1	2½	***	***	***	***	-	-
California Poppy	Sugared Almonds	dark orange with light orange/ yellow centers, rose with creamy yellow centers	4½	11	1	2½	***	***	***	***	-	-
California Poppy	Thai Silk	mix of lemon and creamy yellow	5½	15	1	2	***	***	***	***	+	+
Candytuft	Lemon Bush Dwarf Fairy Mix	lavender, white	4½	12	1	2½	***	***	***	***	-	-
Centaurea	Midget Mix	purple, pink, white, rose	4	12½	¾	1½	***	***	***	***	-	-
Centaurea	The Bride	white	9	21½	¾	2½	***	***	***	***	-	+
Chilean Glory Vine		pink, orange, yellow orange	5	1½			***	***	***	***	+	+
Chrysanthemum (coronarium)	Primrose Gem	creamy yellow with dark yellow centers	5	24½	1½	2½	***	***	***	***	+	+
Cleome	Colour Fountain Mixed	rose, pink, white, lavender-pink	27	35	2	2			***	***	-	-
Cleome	Queen Mix	rose, pink, burgundy, white	20	42	2x2½	5½x6		***	***	***	-	-
Cleome	Sparkler Blush	pink, white, rose	34	39	2½x3½	4x4			***	***	-	-
Corn Poppy	Eighth Wonder	rose, pink, lavender, white	8	12	1	2.5	***	***	***	***	-	-
Cosmos	Gazcho White	white	13	33	1½	4½		***	***	***	-	-
Cosmos	Pied Piper Red	carmine	15	40	1½	2½		***	***	***	-	-
Cosmos	Sensations Mix	rose, white, pink, magenta with yellow centers	12	32½	2½	4½		***	***	***	-	-
Cosmos	Versailles Mixed Colors	white, pink, rose, carmine	13	34	2	4½		***	***	***	-	-
Cosmos	Yellow Garden	yellow, white, pink						***	***	***	-	-
Cutflower Kale	Sunrise		13	23½								+

¹ if the plant is uniform in height, the height is recorded under max only.

² if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

³ * indicates less than full bloom and ** indicates full bloom.

at ratings²

Flower Recommended for
 quantity quality Foliage Overall Growth habit Fragrance Cutting Drying Comments

3	3	3	3		n	y		Outstanding fluted flowers, blue-green foliage, closes up in cloudy weather, very bright color against foliage
3	3	3	3	Upright, ascending	n	y		Gorgeous color, fluted petals, closes up in cold weather, many double flowers, floppy stems but fills in well
3	3	3	3	Open, sprawling	n			Outstanding flower color, closes up in cloudy weather, holds up well in cold, wet weather, floppy stems but fills in well
2	2	2	2	Open, sprawling	n			Does not fill in as well as other California poppies, nice color mix, floppy stems, closes up in cloudy weather
3	4	4	4		n			Mostly double flowers, floppy stems, outstanding contrast with blue-green foliage, fluted blooms
3	3	3	3		n	y		Interesting early season color, but blooms finished in mid season without deadheading, covered with seed pods by mid season, interesting green seed pods
3	2	2	2	Compact mounding	sl	n		Declines in August, early flowers are abundant and colorful, but does not recover well from deadheading
2	2	2	2		y	y		Not the best Centaurea, nice flowers but overall effect is ragged, not showy, needs deadheading, flowers are sparse
4	4	4	4		n			Outstanding vine, grows as fast as scarlet runner bean and has beautiful, dark green, dissected foliage, feathery tendrils, very ornamental
4	4	4	4		sl	y		Large bushy plants with abundant blooms, some single petals, most double-petaled, needs late season deadheading, performs well in cold, wet weather
3	3	3	3	Upright, ascending	n	y		Very nice mid season blooms, excellent mix of colors; tolerates cold, wet weather, has spines
3	3	3	3	Upright, ascending	n	y		Excellent mid to late season color, great color mix
3	3	3	3	Upright, ascending	sl	y		Shorter than most cleomes with nice, uniform color, 2002 All America Selections Flower Award Winner
1	2	2	2		n	y		Nice poppy but declined in mid season, some double flowers
3	3	3	3	Upright, spreading	n	y		Needs deadheading late in season, tolerates cold, wet weather, abundant blooms
3	3	3	3	Upright, spreading	n	y		Weak stems, floppy, interesting tubular flowers, tolerates cold, wet weather, benefits from dark photoperiod pretreatment in greenhouse
3	4	4	4		n	y		Excellent flowers and foliage, tall stems for cuttings, tolerates cold, wet weather, needs deadheading, flowers earlier with dark photoperiod treatment
3	3	3	3	Upright, spreading	n	y		Very nice mix of colors, late to bloom without dark pretreatment
1	1	1	1		sl			Did not flower all season, needs dark pretreatment in greenhouse to set flower buds
		3	3			y		Unusual member of the cabbage family, tall shoots like brussels sprouts topped with creamy white leaves, more unusual than ornamental

7

²0= 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.

Name	Cultivar	Flower color	Height (in.)		Flower size (in.)*		Flowering period†				Frost tolerance			
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers		
Dahlia	Bishop's Children	red, dark orange, yellow, deep rose with yellow centers	12	26	1½	4½		*****	*****	*****	*****	-	-	
Dianthus	Bouquet Purple	purplish pink	10½	25	¾	1½		*****	*****	*****	*****	+	+	
Dianthus	First Love	White with rose markings, light pink, rose	4	18½	1	1½		*****	*****	*****	*****	+	+	
Dianthus	Floral Lace Lilac	rose	3	8½	1½	2		*****	*****	*****	*****	+	+	
Dianthus	Floral Lace Salmon	salmon pink with white edges	2½	11	1½	1½		*****	*****	*****	*****	+	+	
Dianthus	Floral Lace White	white	3½	11	1½	2		*****	*****	*****	*****	-	+	
Dianthus	Melody Pink	purplish pink	10	23½	¾	1½		*****	*****	*****	*****	+	+	
Dianthus	Raspberry Parfait	rose/pink bicolor with burgundy or rose centers	2½	7½	1½	1½		*****	*****	*****	*****	+	+	
Drumstick Flower	Goldstick	gold	18	36½	¾	1½			*****	*****	*****	+	+	
English Daisy	Lipstick	white with rosy red tips and yellow centers	4½	12	1	2			***	*****	*****	+	+	
English Daisy	Tasso Strawberries & Cream	white with rosy accents and yellow centers	5	9	½	1½			***	*****	*****	+	+	
Everlasting	Ebony 'N Ivory	white with black and yellow centers	6½	17½	¾	2			*****	*****	*****			
Everlasting	Ebony Rouge	pink, rose, white with black and yellow centers	9	22	¾	1½			*****	*****	*****	+	-	
Flowering Kale	Red Feather		1	23									+	
Foxglove	Foxy	rose, pink, cream												+
Garden Impatiens	Dazzler® Pink Deep	pink with rose markings	1	4	1	2			*****	*****	*****	*****	-	-
Garden Impatiens	Dazzler® Pink Improved	pink with rose centers	1	2½	1½	2			*****	*****	*****	*****	-	-
Garden Impatiens	Double Fanciful Coral	coral	1	3	1½	2			*****	*****	*****	*****	-	-
Garden Impatiens	Showstopper Cotton Candy	rose, cream, pink	1	2½	1½	1½			*****	*****	*****	*****	-	-
Garden Impatiens	Showstopper Mix Tropical Flair	coral, white, red, pink	2	2½	1½	1½			*****	*****	*****	*****	-	-

* If the plant is uniform in height, the height is recorded under max only.

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

** indicates less than full bloom and * indicates full bloom.

Name	Cultivar	Flower color	Height (in.)		Flower size (in.)*		Flowering period†				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Marigold, French	Moonlight	creamy yellow	9	19	2	3		**	*****	*****	**	-	-
Marigold, French	Mr. Majestic	yellow with mahogany strips, mahogany with yellow stripes, yellow, mahogany	1½	12½	1	1½	**	*****	*****	*****	**	-	-
Marigold, French	Safari Primrose	yellow	3	9½	1½	2½	**	*****	*****	*****	**	-	-
Marigold, French	Safari Red	red with orange and yellow markings	4½	10½	1½	2½	**	*****	*****	*****	**	-	-
Marigold, French	Zenith Red	orange with red markings, red with orange markings	1½	13	1½	2½	**	*****	*****	*****	**	-	-
Marigold, Signet	Lemon Star	yellow with mahogany or orange markings	7	16	¾	1		*	*****	*****	*	-	-
Mexican Sunflower		dark orange with light orange centers	24½	51	2½	3½		**	*****	*****	*	-	-
Nasturtium	Golden Gleam	gold	3	18	2	2½	**	*****	*****	*****	**	-	-
Nasturtium	Jewel Mix	orange, yellow, gold, red	3	50	1½	2½	**	*****	*****	*****	**	-	-
Nasturtium	Moonlight	creamy yellow	2½	16	1½	2½	*	*****	*****	*****	*	-	-
Nasturtium	Tip Top Mahogany	dark orange	1½	11½	1½	2½	**	*****	*****	*****	**	-	-
Nemesia	Tapestry	white, red, lavender, gold, pink, rose with dark throat	3½	14	¾	¾	**	*****	*****	*****	**	+	+
Nicotiana	Only the Lonely	white	29	45	2x6	7x10		**	*****	*****	**	-	+
Nicotiana (alata)	Avalon Bright Pink	pink with rose markings	7	16	1	2	*	*****	*****	*****	*	-	-
Nicotiana (alata)	Hummingbird Mix	red, pink, white, rose	6	15	1½	2	*	*****	*****	*****	*	-	-
Nicotiana (alata)	Saratoga Deep Rose	rose	2½	13	1½	2	*	*****	*****	*****	*	-	-
Nicotiana (x sanderae)	Merlin Peach	pale peachy pink	6	16	1	2	**	*****	*****	*****	**	-	-
Pansy	Baby Bingo Autumn Blaze Mix	yellow and maroon with maroon face, yellow, maroon with yellow markings	5	17	1½	2½	**	*****	*****	*****	**	+	+
Pansy	Bingo Clear White	white with yellow spot in center	4½	10½	1½	2½	**	*****	*****	*****	**	+	+

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

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

** indicates less than full bloom and ★ indicates full bloom.

nt ratings:

Recommended for

Flower quantity quality Foliage Overall Growth habit Fragrance Cutting Drying Comments

Flower quantity	Flower quality	Foliage	Overall	Growth habit	Fragrance	Cutting	Drying	Comments
3	3	3	3	Compact mounding	n			Abundant carpet of color; very nice mix of colors; looks great after cold, wet weather; beautiful even after light frost
4	4	4	4	Upright, spreading	n	y		Attractive flowers, weak stems give sprawling habit, needs deadheading
3	4	4	4		y	n	y	Nice mix of colors, abundant fully double blooms, huge balls of color, needs deadheading, does poorly in cold, wet weather
3	4	4	4		y	n	y	Heads rot and turn brown in rain, needs late season deadheading, excellent flower size, brilliant color
3	4	4	4		sl	n	y	Large flowers on stubby plants, incredibly even height, needs deadheading after cold, wet weather
3	4	4	4		y		y	Huge flower balls on short stubby stems, needs deadheading to remove rotten flowers, nice flower color contrast with foliage
2	3	3	3	Upright, ascending	y	y		Fading flowers covered with purplish spots, then they rot, needs deadheading, not as good as 'Sweet Cream'
3	4	4	4		y	y		Older flowers turn brown in centers in wet weather, needs deadheading, best cream color, excellent contrast between flowers and dark green foliage
3	3	3	3		n		y	Nice compact plant covered with blooms, uniform size, needs deadheading after cold, wet weather
3	3	3	3		y		y	Needs deadheading, variable plant height, striking colors, 1999 All America Selections bedding plant winner
3	3	3	3		sl		y	Beautiful, large flowers, does not hold up well in wet weather, variable plant height, not uniform
3	3	3	3		n		y	Mixed plants yield uneven height and growth patterns, not attractive as a mix
3	3	3	3	Compact mounding	n		y	Brilliant colors, carpets of color, needs deadheading
3	3	3	3		n		y	Very bright mounds of electric color; nice uniform height; needs deadheading especially after cold, wet weather
4	3	3	3	Compact mounding	y		y	Nice large flower heads; brilliant colors in early and mid season; does not hold up well in cold, wet weather; needs deadheading
3	3	3	3		n		y	Unattractive mix of different-sized plants, not the best mix
4	3	3	3	Compact mounding	y		y	Brilliant flower color, a few tall plants in otherwise compact bed, needs late season deadheading, attracts bumblebees, one lemon yellow plant
3	3	3	3		sl		y	Needs deadheading; variable flower height but not unpleasant; electric color; better than most marigolds in cold, wet weather
3	3	3	3		y		y	French; carnation-flowered type; nice large flowers; holds up better than most marigolds in cold, wet weather; needs some deadheading
4	4	4	4		n	y	y	Big, flouney plants covered with blooms; excellent flower display even after wet, cold weather; fills in bed very well and crowds out neighbors

13

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.

Name	Cultivar	Flower color	Height (in) ¹		Flower size (in) ¹		Flowering period ²				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Linaria	Fantasy Mix	lavender, purple, white, yellow, pink, rose	4½	10½	¼	½	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	+	+	
Malope	Choice Mix	rose, white, crimson with dark burgundy veins	11	31	1½	3½		*****	☆☆☆☆	*****	-	-	
Marigold, African	Atlantis Mix	yellow and yellow-orange mix	6	13½	2¼	4¼		**	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, African	Discovery Orange	yellow-orange	3½	8¼	2	4		*	☆☆☆☆	☆☆☆☆	*	-	-
Marigold, African	Mesa Gold	gold	2	7½	1¼	4		*	☆☆☆☆	☆☆☆☆	*	-	-
Marigold, African	Mesa Yellow	yellow	3½	9	2	4		**	☆☆☆☆	☆☆	**	-	-
Marigold, African	Snowball	yellowish white	7½	14	1½	3¼		**	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, African	Sweet Cream	creamy white	8	14	1.75	3½		**	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Bonanza Bee	gold with red markings	2	9	1¼	2½	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Marigold, French	Bonanza Bolero	orange, gold and yellow with red markings	3	8	1¼	2¼	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Bonanza Gold Improved	gold with red markings	3½	10	1	2¼	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Bonanza Mix	gold, yellow, orange, orange with red markings	2	12	1¼	2¼	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Marigold, French	Bonanza Orange	orange	3½	13¼	1½	2¼	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Bonanza Yellow	yellow	1	8	1½	2¼	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Durango Gold	gold	3½	9	1¼	3½	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Durango Mix	yellow, orange, gold, orange with red markings, yellow with red markings	4	14½	1	3		☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆	-	-
Marigold, French	Durango Orange	yellow-orange	3	6	1¼	2¼	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	Durango Yellow	yellow	1½	9½	1¼	3	☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆	-	-
Marigold, French	Juliette	gold with red markings	2	14	1¼	3	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-
Marigold, French	La Bamba	yellow with light orange stripes	7½	30	1¼	2¼	**	☆☆☆☆	☆☆☆☆	☆☆☆☆	**	-	-

¹ if the plant is uniform in height, the height is recorded under max only.

² if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

* indicates less than full bloom and ☆ indicates full bloom.

Plant ratings ²				Growth habit	Recommended for			Comments
Flower quantity	Flower quality	Foliage	Overall		Fragrance	Cutting	Drying	
2	2	2	2		n	n		Interesting petals edged in dark rose
2	2	2	2		n	n		Interesting star pattern from white centers
2	2	2	2		n	n		Nice clear, bright colors, doesn't fill in as well as other impatiens
2	2	2	2		n	n		Excellent clear red, small plants
2	2	2	2		n	n		Nice clear rose color with deeper rose centers
2	2	2	2		n	n		Poor growth, little spread
4	3	3	3		y	+		tolerates cold, wet weather; interesting bicolor flowers- yellow centers with white tips; floppy stems; flowers used for leis and garlands; spicy edible greens; great flouncy stems take over the bed and crowd out neighbors
3	3	3	3		n			Outstanding display in sunny weather, flowers close up in cloudy and rainy weather and evenings
4	4	4	4		n			Outstanding edging plant with dramatic striping, closes up in evenings and in cold, wet weather, choked with blooms when open, a real attention-grabber this season
4	4	4	4	Upright, mounding	n			Excellent contrast between pink flowers and leaves that are chocolate colored with green edges and veins; fills in beds well; one of the best geraniums in ground beds; some deadheading needed; 2002 All America Selections Flower Award Winner
3	3	3	3	Upright, mounding	n			Plants fill in well, needs deadheading for abundant blooms, ratty appearance late in season
3	3	3	3	Upright, mounding	n			Fills in bed nicely; needs deadheading especially after long periods of cold, wet weather
3	3	3	3	Upright, mounding	n			Bright flower colors contrast nicely with bright green foliage, needs deadheading
1	1	1	1	Open, sprawling	y	n		Susceptible to disease from the beginning of the summer, poor flower development, ragged stems, few survive to end of summer
3	3	3	3	Upright, ascending	n	y		Late to bloom but worth the wait, some stems and leaves develop unattractive red coloration in cold weather, excellent stem length for cut flowers
4	4	4	4	Compact mounding	n	n		Excellent mounds covered with tiny blooms all summer; no maintenance; tolerates cold, wet weather; plant at close spacings to encourage carpet effect
1	1	1	1	Open, sprawling	n	y		Floppy stems, weak, not much of a show, possibly because plants were started too early in greenhouse, needs staking, plants disappeared by mid season
1	1	1	1	Open, sprawling	n	n		Floppy stems, disappeared late in season, double flowers, All America Selections Bronze award 1937, feathery foliage
3	3	3	3	Upright, ascending	sl	y		Needs deadheading; white flowers look ragged when old; good color mix; tolerates cold, wet weather; needs deadheading late in season; susceptible to Sclerotinia cottony rot; looks ragged late in season

¹ 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.

Name	Cultivar	Flower color	Height (in) ^a		Flower size (in) ^b		Flowering period ^c				Frost tolerance	
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers
Garden Impatiens	Showstopper Picotee	pink with rose markings	2	4½	1½	2	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Garden Impatiens	Stardust Violet	purplish pink with white centers	1	3	1½	1½	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Garden Impatiens	Super Elfin Lipstick	hot pink, rose	1	3	1½	2	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Garden Impatiens	Super Elfin Red Improved	red	1	4	1½	2	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Garden Impatiens	Super Elfin Rose Improved	rose	1	2½	1½	2	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Garden Impatiens	Super Elfin Ruby	red	1	2½	1½	1½	☆☆☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Garland Chrysanthemum	Shungiku Edible	yellow centers with creamy white tips or all yellow	15	33	1	2½	**☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	+	+
Gazania	Daybreak Rose Shades	shades of rose fading to cream at tips, yellow and brown centers	6	15	2½	3	**☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Gazania	Tiger Stripe Mix	orange, cream, yellow, gold with mahogany stripes	3	13½	2	3½	**☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Geranium	Black Magic Rose	rose pink	6½	14	½	1½	*☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Geranium	Maverick Pink	dark pink fading to light pink centers	8	13	¾	1½	*☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Geranium	Maverick Violet	violet rose with dark rose markings	8	15	1	2	**☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Geranium	Orange Appeal	orange	9	14½	¾	1½	*☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Godetia	Amethyst Glow	purplish pink with white centers	4	15	1½	2	**☆☆	☆☆☆☆	**☆☆	**☆☆	-	-
Godetia	Thoroughly Modern Millie	pink with rose centers, rose with pink centers, white with pink centers, peach	6	19	1½	3		☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Gypsophila	Gypsy	pink	1½	5	¾	¾	**☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Larkspur	Snow Cloud	white	5	32	1	1½	*☆☆	☆☆☆☆	☆☆☆☆	☆☆☆☆	-	-
Larkspur	White King	white	4	12½	1	1½	☆☆	☆☆☆☆	☆☆☆☆	☆☆	-	-
Lavatera	Beauty Mix	white, pink, rose	13	26	1½	3½	**☆☆	☆☆☆☆	☆☆☆☆	**☆☆	-	-

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

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

^c * indicates less than full bloom and ☆ indicates full bloom.

Flower		Plant ratings			Growth habit	Recommended for			Comments
quantity	quality	Foliage	Overall	Fragrance		Cutting	Drying		
3	3	4	4	Upright, ascending	y	y		Late to bloom, many plants have dark burgundy tinted foliage, others are green, excellent contrast between flowers and foliage, plant height uneven, single or semi-double flowers, solids and bicolors	
4	4	4	4	Upright, ascending	n	y		Bright, vibrant color, outstanding even in rainy, cold weather, excellent stem length for cutting	
4	3	3	3		y	y		Nice tall plant for cutting, variable flower height, beautiful mix of colors	
2	3	2	2		sl	y		Needs some deadheading; some red-flowered plants, poor growth this year	
4	4	4	4		n	y		Some plants with solid colors, most with white or faded pink edges, needs deadheading	
4	4	4	4		sl	y		Needs deadheading, flowers turn brown in rain, spreads well to cover planting area, variable flower height	
3	3	3	3	Upright, ascending	y	y		Taller than most dianthus, abundant flowers, wonderful spicy fragrance, variable flower height, minor deadheading needed, All American Selections winner for 2000, holds up well in cold, wet weather, feathery edges to petals, one white-flowered plant	
4	4	4	4	Upright, mounding	sl	y		Needs deadheading, nice bicolor pink flowers, compact, mounded plants	
3	3	3	3		y	y	y	Unusual mounds of grasslike silvery foliage with tall, sparse leafless stems topped with bright yellow balls, real conversation piece, should be planted as background with other yellow flowers	
4	4	4	4		n			Outstanding mounds of green foliage topped with abundant daisy-like flowers, beautiful contrast in flowers with red tipped petals	
4	4	4	4		n			Excellent compact plant with tight mounds of foliage and abundant daisy-like flowers. Most flowers are white, but some have tinges of pink on the petals, Fleuroselect Quality Mark Winner	
3	3	3	3		n	y	y	Full of flowers, excellent contrast between white flowers and black centers, nice long stems for cutting, Fleuroselect Quality Mark Winner	
4	4	4	4	Upright, spreading	y	y	y	Abundant small blooms on stiff stems, very attractive, holds up well in cold, wet weather	
		3	3		n	n		Holds up well in cold, wet weather, nice feathered foliage with purplish midribs, not a true red	
				Upright, ascending	n	y		Did not bloom all summer, perhaps because of crowded seedlings in the greenhouse	
2	2	2	2		n	n		Nice large flowers, fills in better than most impatiens	
2	2	2	2		n	n		Nice flower size, fill in well for impatiens	
2	2	2	2		n	n		Nice double flowers	
2	2	2	2		n	n		Tiny plants, not showy	
2	2	2	2		n	n		Nice mix of colors, uneven growth with different colors	

9

* 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:

Flower		Plant ratings:			Growth habit	Recommended for			Comments
quantity	quality	Foliage	Overall	Fragrance		Cutting	Drying		
2	2	2	2	Upright, spreading	n			Susceptible to Sclerotinia cottony rot; poor survival through season; nice color early; splotchy; ragged flowers in cold, wet weather	
3	3	3	3		y			Early in season, plant is small mound, more flowers than plant, slow to fill out bed, variable height, petite flowers cover the mounds, very nice mix of colors	
3	3	3	3	Upright, spreading	sl			Excellent medium sized blooms early in season; doesn't hold up well in cold, wet weather; few blooms late in season; needs deadheading	
3	3	3	3		sl			Excellent early in season, but needs deadheading, water soaked and ratty in cold, wet weather	
3	3	3	3		sl			Nice double flowers early in season, needs deadheading, susceptible to Sclerotinia cottony rot, has more flowers than most doubles late in season	
3	3	3	3		y			Nice color, needs deadheading, susceptible to Sclerotinia cottony rot, petals speckled after rains, nice mounds of color all season	
3	3	3	3		n			Excellent electric blooms early in season, susceptible to Sclerotinia cottony rot	
3	3	3	3	Open, sprawling	y			Susceptible to Sclerotinia cottony rot, splotchy flowers after rains, nice mix of pink colors	
4	4	4	4		sl			Excellent mounds of velvety purple flowers; one of the best after cold, wet weather; susceptible to Sclerotinia cottony rot	
2	2	2	2		y			Died out in mid season due to Sclerotinia cottony rot, one of the most susceptible petunias to this disease	
3	3	3	3	Upright, spreading	sl			Very nice mix of flower colors, does not hold up well in rain, all flowers have light-colored petals, dark veins, dark throat, susceptible to Sclerotinia cottony rot	
2	2	3	3	Upright, spreading	sl			Susceptible to Sclerotinia cottony rot, declines in mid August without fungicide treatment, excellent color, 1998 All America Selections winner	
3	4	4	4	Upright, spreading	n			Abundant blooms all summer, needs deadheading, splotchy, ragged petals following rain	
4	4	4	4	Upright, spreading	y			Mountains of flowers; needs bed by itself; small flowers; very fragrant; tolerates cold, wet weather; very susceptible to Sclerotinia cottony rot	
4	4	4	4	Upright, spreading	y			Mountains of flowers, needs a bed by itself; spreads upward and outward; outstanding late season blooms; holds up well holds up well in cold, wet weather; susceptible to Sclerotinia cottony rot	
3	3	3	3		sl			Very nice color, blooms well all season, splotchy flowers after rain, needs deadheading	
					y	y		Preen® damage, died early in season	
2	4	3	3		n	n		Outstanding small mounds of semi-double flowers; very delicate; ornamental; nice mix of pastel colors; holds up well in cold, wet weather; needs close spacing for best show; lured by Preen® herbicide	
4	3	3	3		n			Eye-popping, vibrant pink semi-double flowers, needs deadheading, messy, few flowers in mid August, 2001 All America Selections Winner, does not spread like other portulacas	
4	3	3	3		n			Nice semi-double flowers, needs deadheading for best all-season color	

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.

Name	Cultivar	Flower color	Height (in)		Flower size (in)*		Flowering period†				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Rudbeckia	Cherokee Sunset	gold, gold streaked with mahogany, mahogany with mahogany centers	11	32	3½	6		*****	*****	*****		+	+
Rudbeckia	Chim Chiminee™	mahogany, gold with mahogany centers	14	31	2½	6		*****	*****	*****		+	+
Rudbeckia	Indian Summer	gold with brown centers	7	29	2½	4½		*****	*****	*****		+	+
Rudbeckia	Irish Eyes	gold with green centers	3	34½	3	6		*****	*****	*****		+	+
Rudbeckia	Rustic Colors	yellow, gold, burnt orange	4	27	2½	4½		*****	*****	*****		+	+
Rudbeckia	Sputnik	yellow tips, mahogany base with brown centers	14	30	1½	4		*****	*****	*****		+	+
Salvia	Argent	white	9½	19	½x½	4x1½		*****	*****	*****		+	+
Salvia	Blue Bedder	blue	21	38	½x½	14x1½		*****	*****	*****		+	+
Salvia	Empire Orange Bicolor	dark orange bracts with light orange to white flowers	7	11	5½x2½	3x1½		*****	*****	*****		-	-
Salvia	Victoria	royal blue	13	27	½x½	9x1½		*****	*****	*****		+	+
Salvia	White Porcelain	white	13	27	½x½	7½x½		*****	*****	*****		+	+
Salvia (horminum)	Claryssa Mix	pink, purple bracts	14½	32	½x½	5x2		*****	*****	*****		+	+
Salvia (splendens)	Empire Salmon	salmon	8½	11½	2x1	4½x2		*****	*****	*****		-	-
Salvia (splendens)	Orange Zest	scarlet	4	14	2x1½	7x3½		*****	*****	*****		-	-
Salvia (splendens)	Red Hot Sally	scarlet red	5½	14½	2x1½	8x2½		*****	*****	*****		-	-
Salvia (splendens)	Salsa Salmon	salmon	6	11	½x½	4x2		*****	*****	*****		-	-
Salvia (splendens)	Vista Red	scarlet red	6	15	3x2	5x3		*****	*****	*****		-	-
Sanvitalia	Irish Eyes	yellow with green centers	2	12	½	1		*****	*****	*****		-	+
Sanvitalia	Mandarin Orange	orange with chocolate centers	3	15	½	1		*****	*****	*****		-	-
Sanvitalia	Orange Sprite	orange with chocolate centers	2	10	½	1		*****	*****	*****		-	-

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

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

• indicates less than full bloom and ★ indicates full bloom.

Plant ratings ²					Recommended for				Comments
Flower quantity	Flower quality	Foliage	Overall	Growth habit	Fragrance	Cutting	Drying		
4	3	3	3		n	y	y	Interesting rich colors, mostly mahogany, some fully double and semi-double flowers, All-America Selections Flower Award for 2002	
3	3	3	3		n	y	y	Interesting linear, "quilled" petals on some flowers, nice mix of golds and mahogany, excellent for cutting	
4	4	4	4		n	y	y	Late to bloom but worth the wait, excellent form, variable flower size, nice dark green foliage, All America Selections winner 1995, the best of the standard rudbeckias	
4	4	4	4		n	y	y	Very nice green centers, flowers smaller than other rudbeckias but very ornamental	
4	3	3	3		n	y	y	Attracts bees; interesting mix of flower colors; very attractive; tolerates cold, wet weather	
4	4	4	4		n	y	y	Excellent abundant blooms for late season color, attracts bees, holds up well in wet weather	
3	3	3	3	Upright, ascending	y	y		Beautiful silvery stalks; nice as cut flower; holds up well in cold, wet weather; medium size stems for cutting	
4	4	4	4		n	y	y	Excellent salvia for backgrounds, fillers and cutting, large bushy plants covered with colorful spikes	
3	2	2	2	Upright, ascending	n			Susceptible to Sclerotinia cottony rot, needs deadheading, interesting bicolor flowers, one of the nicer salvias for this area	
4	4	4	4		n	y	y	Holds up well in cold, wet weather, excellent filler or background plant, nice stem length for cutting	
3	3	3	3		sl	y	y	Excellent bushy plant covered with spikes of colorful bracts and flowers, great for cutting	
3	3	3	3	Upright, ascending	n	y	y	Upright stems, great mix of colors, well branched plant with colorful bracts	
3	3	3	3	Upright, ascending	n			Needs deadheading, not as good as Salsa Salmon, little Sclerotinia damage	
3	3	3	3		n			Old flowers fade to a pale red; deadheading needed; fills in nicely; ragged appearance after cold, wet weather	
3	3	3	3		n			Excellent color and performance; nice tall flower stalks; foliage exceeds flower height on some plants; susceptible to Sclerotinia cottony rot; one of the best in cold, wet weather	
2	2	2	2	Upright, ascending	n			Very nice flower color; susceptible to Sclerotinia cottony rot; needs deadheading; flowers hold up well in cold, wet weather	
3	3	3	3	Upright, ascending	n			Excellent color and large bloom spikes, susceptible to Sclerotinia cottony rot, needs deadheading	
4	4	4	4		n	y		Seedlings difficult to start; remained very small but grew nicely once planted; tolerates cold, wet weather; unusual greenish centers on flowers; nice mounding plant; little maintenance	
4	4	4	4		n	y		Reliable edging plant; long season blooms; no maintenance; All America Selections winner; tolerates cold, wet weather; nearly identical to Orange Sprite	
4	3	3	3		n			Outstanding small mounds of dark green foliage covered with blooms, no maintenance, great edging plant, nearly identical to Mandarin Orange	

¹ 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.

Name	Cultivar	Flower color	Height (in)		Flower size (in) ¹		Flowering period ²				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Scabiosa	Salmon Queen	salmon pink	11	26½	1½	2½		*****	*****	*****	*****	+	-
Shasta Daisy	Crazy Daisy	white with yellow centers								*****	*****	-	+
Shasta Daisy	Polaris	white with yellow centers									*****	-	+
Shasta daisy	Silver Spoons	white/yellow centers	13	38½	1½	3	*****	*****	*****	*****	*****	-	-
Snapdragon	Bells Mixture	red, yellow, white, red-orange	4	11½	1½x1½	2½x1½	*****	*****	*****	*****	*****	-	-
Snapdragon	Black Prince	dark red	7	21½	2x2	7x2		*****	*****	*****	*****	+	+
Snapdragon	Brazilian Carnival	yellow, yellow and pink, rose and cream, pink and bronze	10½	27	4x1½	10½x3		*****	*****	*****	*****	+	+
Snapdragon	Double Azalea Apricot	apricot/light orange	6	32	5x2	9x3½		*****	*****	*****	*****	+	+
Snapdragon	Double Azalea Pink	Pink	7	27	4x3	10x3½		*****	*****	*****	*****	+	+
Snapdragon	Floral Showers Purple	Deep purplish rose	4½	9	1½x1	5½x1½	*****	*****	*****	*****	*****	+	+
Snapdragon	Freesong White	white with yellow lip	8	22	2½x1½	7½x2½		*****	*****	*****	*****	+	+
Snapdragon	Hobbit Dwarf Mix	rose, pink, apricot, white	2	19	2x1	5x2½	*****	*****	*****	*****	*****	+	+
Snapdragon	Jamaican Mist	pink, peach, yellow, rose, light brown	5	16	2½x1½	5x2½	*****	*****	*****	*****	*****	-	-
Snapdragon	La Bella Mix	red, bronze, pink, yellow, white, purple, bicolors	6	22½	3x2	9½x3	*****	*****	*****	*****	*****	+	+
Snapdragon	Liberty Cherry	cherry red	9	18	3x1½	6x3	*****	*****	*****	*****	*****	+	+
Snapdragon	Pink Bells	pink	4	26½	1½x½	2½x2	*****	*****	*****	*****	*****	+	+
Snapdragon	Ribbon Yellow	yellow	7	19	3x1½	9x2½	*****	*****	*****	*****	*****	+	+
Snapdragon	Rocket Cherry	cherry red	11	33	20x2½	5½x2	*****	*****	*****	*****	*****	-	-
Snapdragon	Rocket Mix F1	pink, red, yellow, orange, white, orchid	8½	30	5½x2	13½x3	*****	*****	*****	*****	*****	-	-
Snapdragon	Tahiti Mauve	pink/mauve	3	16	1½x1½	6x2½	*****	*****	*****	*****	*****	+	+
Statice	Evening Sunset Mixed	orange, yellow	8½	31	½	½				*****	*****	+	+

¹ if the plant is uniform in height, the height is recorded under max only.

² if flower size is uniform, size occurs in max only; sizes with an x like 12x3 indicates a spike flower type with the height x width.

* indicates less than full bloom and ☆ indicates full bloom.

Plant ratings:

Plant ratings:				Growth habit	Recommended for			Comments
Flower quantity	Flower quality	Foliage	Overall		Fragrance	Cutting	Drying	
3	3	3	3		n	y		Nice ruffled edges with dark faces, first hybrid ruffled pansy, needs deadheading following prolonged rains
3	3	3	3	Upright, mounding	y	y		Large blooms; reliable; excellent mix of solid colors; better than most pansies after prolonged wet, cold weather
3	3	3	3		y	y		Mix of clear and faced pansies, mostly blues and lavenders, variable flower size and plant height
4	4	4	4	Upright, spreading	y	y		Large flowers, some with dark faces, some clear; needs deadheading especially after prolonged cold, wet weather
						y		Outstanding flower color, large flowers, grow with solid purples for best contrast
						y		Large flowers; outstanding color; holds up well in cold, wet weather; very uniform in size of plant and flowers; excellent marine blue color
4	4	4	4	Upright, mounding	y	y		Excellent mix of mostly pastel colors, needs deadheading
4	4	4	4	Upright, mounding	y	y		Velvety flowers with bright yellow center spots; needs deadheading especially after cold, wet weather; flowers are ragged and splotchy in prolonged rain
4	4	4	4	Upright, mounding	n	y		Excellent mix of flower colors; better than most pansies after prolonged wet, cold weather
4	4	4	4		y	y		All America Selections for 2002; Fleuroselect Gold Medal Winner; outstanding color; interesting two toned effect with blue on top petals and bright yellow beneath, striking dark blue markings; needs deadheading; abundant blooms; looks ratty after periods of cold, wet weather
3	3	3	3	Upright, mounding	y	y		Holds up well in cold, wet weather; very nice ruffled edges
3	3	3	3	Upright, spreading	sl			Velvety texture to petals, rich appearance, susceptible to Sclerotinia cottony rot
3	3	3	3		sl			Needs deadheading, susceptible to Sclerotinia cottony rot
2	2	2	2	Upright, spreading	sl	n		Small flower size; needs deadheading; susceptible to Sclerotinia cottony rot; holds up well in cold, wet weather
3	3	3	3	Upright, spreading	sl			Splotchy petals after rain, susceptible to Sclerotinia cottony rot, large double flowers most spectacular early in season
3	3	3	3	Upright, spreading	sl			Very large double flowers, attractive blooms, needs deadheading, susceptible to Sclerotinia cottony rot
3	3	3	3	Open, sprawling	n	y	y	Nice bushy plants with huge flowers; best display early to mid season; holds up better than most petunias in cold, wet weather; susceptible to Sclerotinia cottony rot
3	3	3	3	Upright, spreading	sl			Excellent color and form, velvety flower texture, very attractive, susceptible to Sclerotinia cottony rot
3	3	3	3		sl			Needs deadheading; nice true red; nice bushy plants fill in beds; splotchy petals after cold, wet weather

Leaf: 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.

Name	Cultivar	Flower color	Height (in) ^a		Flower size (in) ^b		Flowering period ^c				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Pansy	Can Can F1	lavender, purple, white with dark face	7	15	1	2½	**	*****	*****	*****	*****	+	+
Pansy	Fama Clear Faced Mixture	lavender, yellow, white, purple, blue, light orange	6	14	1½	2½	*****	*****	*****	*****	*****	+	+
Pansy	Fama Love Song Mixture	cream and lavender with purple face, purple with white markings, white, blue, yellow	5½	18	1½	2½	*****	*****	*****	*****	*****	+	+
Pansy	Fama Mixed Colors	cream, yellow, purple, burnt orange, white with purple or dark red face	5	13½	1½	2½	*****	*****	*****	*****	*****	+	+
Pansy	Fama Spanish Eyes	cream with purple face					*****	*****	*****	*****	*****	+	+
Pansy	Fama True Blue	clear blue					*****	*****	*****	*****	*****	+	+
Pansy	Impressions Mix	rose, cream, lavender, yellow, red, purple with burgundy face	11	17½	1½	2½	*****	*****	*****	*****	*****	+	+
Pansy	Light Strawberry Sundae F1 Hybrid	rose to burgundy with cream margins, rose face	3	14½	1½	2½	*****	*****	*****	*****	*****	+	+
Pansy	Maxim Hybrid Mixed	yellow, red, cream, purple, blue, orange with dark face	7	13	1	2½	*****	*****	*****	*****	*****	+	+
Pansy	Ultima Morpho	blue and yellow with dark blue markings	5½	12	2½	1	*****	*****	*****	*****	*****	+	+
Pansy	Contessa Ruffled Mix	cream, yellow, lavender, rose with dark face	6	14	1	2½	*****	*****	*****	*****	*****	+	+
Petunia	Carpet Blue	bluish purple	4	13	1½	2½	*****	*****	*****	*****	**	-	-
Petunia	Carpet Lilac	lavender	2	13	1½	2½	*****	*****	*****	*****	**	-	+
Petunia	Carpet White	white	4½	15	1½	2½	*****	*****	*****	*****	**	-	+
Petunia	Double Cascade Mix	burgundy, pink, lavender pink, lavender with purple veins, white	4	15½	2½	3½	**	*****	*****	*****	**	+	+
Petunia	Double Cascade Orchid Mist	very pale orchid pink	5	16	2½	4½	**	**	**	**	**	-	-
Petunia	Double Cascade Pink Soft	light pink with dark pink veins	4	13	2½	4½	**	*****	*****	*****	**	+	+
Petunia	Dreams Midnight Improved	bluish purple	3	12½	2½	3½	**	*****	*****	*****	**	-	-
Petunia	Dreams Red	red	4	15	1½	2½	**	*****	*****	*****	**	-	-

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

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

^c * indicates less than full bloom and ** indicates full bloom.

Plant ratings?					Recommended for			Comments
Flower quantity	Flower quality	Foliage	Overall	Growth habit	Fragrance	Cutting	Drying	
2	3	3	3		n	y	y	Interesting large flowers with fluted edges on petals; large yellow centers; a very different kind of marigold; needs deadheading especially after cold, wet weather
4	4	4	4		sl	y	y	Excellent bushy plant covered with small blooms; interesting pattern ranging from pure colors to stripes and splotches of yellow and mahogany; holds up better than most marigolds in cold, wet weather; Scottish heirloom variety
3	3	3	3		y	n	y	Very nice electric color, needs deadheading especially in rainy weather
3	4	4	4		y		y	Needs deadheading, very nice mix of colors, nice uniform height
4	3	3	3		y		y	Excellent mix of colors, Floranova winner, needs some deadheading late in season, nice blanket of color
3	3	3	3		sl	y	y	Very nice signet type with striking markings; bright color; tolerates cold, wet weather; need some deadheading in wet weather
3	3	3	3		sl	y	y	Interesting large plant great eye-popping color, small but abundant flowers, interesting trumpet-shaped, velvety flower base
4	3	3	3		y	y		Giant mounds of foliage and flowers; many flowers hidden beneath the foliage but still a great display; holds up well in cold, wet weather; some semi-double flowers; trailing type; All America Selections Winner for 1933
4	3	3	3		n	y		Foliage overwhelms flowers late in season, great mix of colors but hard to see
4	3	3	3		n	y		Very nice flower color, light green foliage, good flower display above foliage
4	4	4	4		n	y		Pale foliage (called golden green in catalogs), nice flowers but many hidden by foliage
4	4	4	4		n			Susceptible to Sclerotinia cottony rot, excellent mounds of tiny flowers, fills in well, nice color mix
3	3	3	3	Upright, ascending	y	y		Late to bloom; excellent trumpet-shaped flowers; some cuts in leaves; tolerates cold, wet weather; outstanding height; huge leaves
4	2	2	2		n			Interesting light pink color, 2001 All America Selections bedding plant winner, variable plant height, covered with blooms, needs deadheading late in season
3	2	2	2	Upright, ascending	n			Uneven height, packed with flowers, spotty flowering late in season
3	3	3	3	Upright, ascending	n			Interesting uniform color, very uniform plant height, packed with flowers, not very attractive late in the season
2	1	1	1		n			Unusual flower color, plants don't fill in as well as other nicotianas, nice large upward-facing blooms
4	3	3	3		y	y		Unusual flower colors; needs deadheading after cold, wet weather; mini multiflora type
4	3	3	3		y	y		Very nice large flowers; clear white petals; needs deadheading after cold, wet weather

lant ratings'

Flower		lant ratings'			Growth habit	Recommended for			Comments
quantity	quality	Foliage	Overall	Fragrance		Cutting	Drying		
3	3	3	3		y	y		Holds up well in cold, wet weather; floppy stems; late to bloom but very nice "pin cushions"	
						y		Overwhelmed by neighboring plants; not much of a show; interesting abundant linear petals; petals become brown-tipped in cold, wet weather; some fully double flowers	
						y		One of the best Shasta types; excellent tall, straight stems for cutting; very large flowers; grows well in wet, cold weather; late but worth the wait	
3	3	3	3		n	y		The spoon-type petals do not occur on every flower or within the same flower, uneven height, abundant blooms	
3	2	2	2		n	n		One of the best dwarf snaps, open, azalea-type flowers, needs deadheading for season-long color	
4	4	4	4		n	y		Flowers look like velvet, very rich, holds up well in cold, wet weather	
4	4	4	4		n	y		Interesting bicolor flowers, tall stems great for cutting	
3	3	3	3		n	y		Holds up well in cold, wet weather; outstanding double, open flowers; excellent form	
3	3	3	3		y	y		Interesting fully double open butterfly-type flowers with ruffled edges, very ornamental but floppy stems, needs support for best display	
4	3	3	3		n	n		Excellent carpet of color nearly all season, needs deadheading for best display	
3	4	4	4		n	y		Variable flower height, nice clear white color, shorter than other snapdragon cultivars	
3	3	3	3		n	n		Needs deadheading, nice open bell-shaped butterfly-type flowers, taller than most other dwarf snaps, variable height makes for ragged appearance	
3	3	3	3	Upright, ascending	n	y		Very nice warm color, open butterfly blooms, needs deadheading for continuous season blooms	
3	3	3	3		n			Excellent color mix, uneven height, butterfly-type, choked with blooms, needs deadheading late in season	
3	4	4	4		n	y	n	Long stems for cutting, good uniform color	
3	3	3	3	Compact mounding	n			Needs deadheading to maintain full-season color; holds up well in cold, wet weather	
3	3	3	3		n	y		Needs deadheading; nice straight stems for cutting; excellent color; poor growth in cold, wet weather	
3	3	3	3	Upright, ascending	sl	y		Holds up well in cold, wet weather; superb color; recommended for cutting	
3	3	3	3	Upright, ascending	n	y		Holds up well in cold, wet weather; excellent mix of colors; nice stem length for cutting	
3	3	3	3		n	n	n	Needs deadheading to maintain full-season color; bicolor carpet; occasional plant to 14 inches; tolerates cold, wet weather	
4	4	4	4	Upright, ascending	n	y	y	Holds up well in cold, wet weather; some flowers appear washed out; late to bloom	

* 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.

Name	Cultivar	Flower color	Height (in)*		Flower size (in)†		Flowering period‡				Frost tolerance			
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers		
Statice	Sirima	pink, rose, lavender, white mix	7	29	¼	¼		**	***	***	***	***	+	+
Stock	Cheerful Mixture	yellow	6	7	2x1½	6x2½	**	***	***	***	***	***	-	-
Stock	Legacy Mix	pink, white, lavender, purple	12	18½	1½x1	8½x2¼		**	***	***	***	***	+	+
Strawflower	Salsa Mix	red, orange, yellow, burgundy	19½	51	1¼	2¼		**	***	***	***	***	+	-
Sunflower	Bohemian Rhapsody	gold streaked with mahogany, chocolate centers	21	50	2¼	5¼		**	***	***	***	***	-	-
Sunflower	Chianti	gold with brown centers	50	59	3½	6		**	***	***	***	***	-	-
Sunflower	Dorado	golden orange with black centers	22	24	4	27		**	***	***	***	***	-	-
Sunflower	Giant Sungold	gold		50	5	8		**	***	***	***	***	-	-
Sunflower	Ikarus	yellow with chocolate centers	26½	53	3	6		**	***	***	***	***	-	-
Sunflower	Infrared Hybrid	mostly dark red with chocolate centers	36	70	5	6½		**	***	***	***	***	-	-
Sunflower	Lemon Flair	yellow	25½	36	3	6		**	***	***	***	***	-	-
Sunflower	Ring of Fire	yellow with dark red ring, brown centers	15	35	2¼	6		**	***	***	***	***	-	-
Sunflower	Soraya	gold with brown centers	46	61	3½	5½		**	***	***	***	***	-	-
Sunflower	Starburst Aura	gold with green centers	22	35	4	5		**	***	***	***	***	-	-
Sunflower	Sunbeam	yellow with yellow center	50	59	5½	6		**	***	***	***	***	-	-
Sunflower	Sundown	gold, mahogany	38	48	5	6½		**	***	***	***	***	-	-
Sunflower	Titanic	gold									***	***	-	-
Sunflower	Tohoku Yae	gold	35	51	7	7½		**	***	***	***	***	-	-
Torenia	Clown Mix		14	31	1½	2¼		**	***	***	***	***	-	-
Venidium	Jaffa Ice	orange or white with brown centers	23	48	2	4½		**	***	***	***	***	-	-
Venidium	Orange Prince	orange	23	48	2	4½		**	***	***	***	***	-	-

* If the plant is uniform in height, the height is recorded under max only.

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

‡ * indicates less than full bloom and ** indicates full bloom.

lant ratings*

Flower		lant ratings*		Growth habit	Recommended for			Comments
quantity	quality	Foliage	Overall		Fragrance	Cutting	Drying	
4	4	4	4	Upright, ascending	n	y	y	Excellent mix of pastel colors; nice upright stems for cutting; holds up well in cold, wet weather
1	1	1	1		y	y		Poor growth in summer, flowers early then declines
4	4	4	4		y	y		Outstanding flower display all summer; white flowers mature a bit before pinks and lavenders; excellent contrast between silvery foliage and flowers; holds up well in cold, wet weather
4	4	4	4		n	y	y	Holds up well in cold, wet weather; nice tall, straight stems; excellent for cutting
3	3	3	3		n	y		Shorter than expected, nice medium sized flower heads, pollenless, well-branched plants
3	3	3	3		n	y		Medium sized heads, declines by mid August, nice small sunflower
3	3	3	3		n	y		Single-stemmed plants with medium sized flowers, pollenless
3	3	3	3		n	y		All ray flowers, fully double heads
3	3	3	3		n	y		Excellent, long-blooming, medium-sized sunflower perfect for cutting, many flowers per stem, great background plant
3	3	3	3		n	y		Small flowers, finished by mid August, nice rich colors, great for borders
1	1	1	1		n	y		Interesting feathery, "crested" heads, well-branched plants, plant declines by mid August, small heads, not the best sunflower, pollenless
2	3	3	3		n	y		Interesting bicolor blooms, 2001 All America Selections winner, short plant with multiple flower heads per stem, not the most ornamental sunflower
3	3	3	3		n	y		Medium sized flowers, upward facing heads, very straight stems, All America Selections winner 2000, petals bleach quickly
2	3	3	3		n	y		Short plant with multiple branches of small, feathery, pollenless flowers; holds up well all season; needs some deadheading after cold, wet weather
3	4	4	4		n	y		Disk bigger than ray flowers, centers greenish yellow
3	3	3	3		n	y		Nice rich colors, medium sized multiple heads, pollenless, well-branched plants
3				n	y		Nice upward-facing heads with all ray flowers, big puffs of gold, fully double	
3	4	4	4	n	y		Fully double flowers surrounded by a single band of gold ray flowers, susceptible to disease, did not last all season	
				n			Did not bloom or grow well during season	
2	4	4	3	n	y		Lanky growth, flowering stems upright spreading, needs lots of room, exotic looking flowers, needs deadheading in mid season, poor growth in wet weather	
3	4	4	4	sl	y		Lanky growth, fuzzy stems and buds, needs lots of room, needs deadheading late in season, exotic-looking flowers	

* 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.

Name	Cultivar	Flower color	Height (in)*		Flower size (in)*		Flowering period†				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Verbena	Crystal Ball Mix	pink, lavender, rose, white, red, purple, peach	3	13	½	¾	**	***	***	***	***	+	+
Verbena	Moon River	lavender	8	23½	¾	1	**	***	***	***	***	+	+
Verbena	Quartz Blue	purple with lavender centers	3½	14½	¾	1	**	***	***	***	***	+	+
Verbena	Quartz Burgundy	burgundy	3	15	¾	1	**	***	***	***	***	+	+
Verbena	Quartz Formula Mix	red, white, rose, purple, pink	3¾	13	¾	1	***	***	***	***	***	+	+
Verbena	Quartz Mix Waterfall	purple, lavender, cream, rosy purple	2	16	¾	1	**	***	***	***	***	+	+
Verbena	Quartz Polka Dot Mix	red, pink, purple some with white centers	4	14	¾	1	**	***	***	***	***	+	+
Verbena	Quartz Red with Eye	cherry red with white centers	2½	10½	¾	1	**	***	***	***	***	+	+
Verbena	Quartz Scarlet	scarlet	3	12	¾	1	***	***	***	***	***	+	+
Verbena	Quartz White	white	3	13½	¾	1	**	***	***	***	***	+	+
Verbena	Romance Pastel Mix	rose, apricot, white, pink, lavender	3¾	12	¾	1	**	***	***	***	***	+	+
Verbena bonariensis		purple	24	43	¾	1		**	***	***	***	+	-
Viola	Four Seasons Golden Yellow	yellow	3¾	20½	¾	1½	***	***	***	***	***	+	+
Viola	Four Seasons Mix	yellow, purple, blue, cream	3	18½	¾	1½	***	***	***	***	***	+	+
Viola	Penny Porcelain	lavender with cream centers	5	12	¾	1½	***	***	***	***	***	+	+
Viola	Sorbet Blueberry Cream	lavender blue and cream with dark blue markings and yellow center	8½	15½	1	1½	***	***	***	***	***	+	+
Viola	Sorbet Formula Mix	lavender, yellow, purple, blue	3	11	1½	2	**	***	***	***	***	+	+
Viola	Sorbet French Vanilla	white with tiny blue markings	3	14	¾	1½	***	***	***	***	***	+	+
White Mignonette		white	19	35	2½	6 x 1		**	***	***	***	+	+
Zinnia (angustifolia)	Crystal White	white with yellow centers	2½	12	¾	1½		**	***	***	***	-	-

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

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

** indicates less than full bloom and *** indicates full bloom.

lant ratings-

Flower		lant ratings-			Growth habit	Recommended for			Comments
quantity	quality	Foliage	Overall	Fragrance		Cutting	Drying		
3	3	3	3		y	y		Similar to Quartz Mix, very nice color mix, needs deadheading in late summer	
3	3	3	3		y	y		Best use as filler or in containers; too open to be nice alone; holds up well in cold, wet weather	
3	3	3	3	Compact mounding	sl	y		Nice, two-toned flowers, needs deadheading, not "blue"	
4	4	4	4		n	y		Excellent color, needs some deadheading	
3	3	3	3		n	y		One of the nicer verbenas, good flower color mix, blooms evenly, needs some deadheading in mid season, cheerful color mix	
4	4	4	4	Upright, mounding	y	y		Very nice display, covered with flowers, needs deadheading to maintain flowers	
3	3	3	3	Compact spreading	n	y		Blooms unevenly; only some colors in bloom early in season; outstanding mix of colors; interesting white centers for polka dot effect; holds up well in cold, wet weather; needs deadheading	
4	4	4	4		n	y		Excellent flower size, great contrast with white "eyes" needs deadheading	
3	3	3	3		n	y		Outstanding, eye popping flowers cover the foliage, one of the best shows of color for verbenas	
3	3	3	3		y	y		Beautiful pure white flowers, nice contrast with dark green foliage, needs deadheading	
3	3	3	3		n	y		Nice mix of colors; late to bloom; holds up well in cold, wet weather; needs deadheading	
3	3	3	3	Upright, spreading	n	y		Interesting, tiny purple flowers on tall, very open, thin branches; best used as accent or filler; tolerates cold, wet weather	
4	4	4	4		sl	y		Huge mounds of bright yellow flowers all season; holds up well in cold, wet weather; sunny beacons in the garden	
4	4	4	4		n	y		Holds up well in cold, wet weather; great color combination; huge mounds of flowers; very ornamental	
4	4	4	4	Upright, mounding	y	y		Outstanding mounds of flowers; excellent after periods of cold, wet weather; one of the best violas	
	4	4	4		n	y		Holds up well in cold, wet weather; Outstanding color; mounds of blooms	
4	4	4	4	Upright, mounding	sl	y		Excellent mounds of mixed colors, very reliable	
4	3	3	3		sl	y		Very nice white color; excellent mounds crowded with flowers all season; performs well in cold, wet weather	
3	3	3	3	Upright, ascending	y	y		Excellent tall background plant or accent; big; bushy; attracts bees; performs well in cold, wet weather; late but nice	
3	3	3	3		n		y	Attractive compact plant for edging, mounds covered with small white flowers, 1997 All America Selections bedding plant winner	

Name	Cultivar	Flower color	Height (in)*		Flower size (in)†		Flowering period‡				Frost tolerance		
			min	max	min	max	Jun	Jul	Aug	Sep	foliage	flowers	
Zinnia (angustifolia)	Star White	white with gold centers	3	15	¼	2		***	*****	*****	*	-	-
Zinnia (elegans)	Benary's Giant Formula Mix	scarlet, yellow, purplish pink, red, orange, green	4	22	2¼	3¼		***	*****	*****	*****	-	-
Zinnia (elegans)	Benary's Giant Golden Yellow (Blue Point Golden Dawn)	golden yellow	14	28½	1¼	3¼		***	*****	*****	*****	-	-
Zinnia (elegans)	Benary's Giant Salmon Rose (Blue Point Eldorado)	light orange	9	23	2¼	4			*****	*****	*****	-	-
Zinnia (elegans)	Blue Point Formula Mix	cream, scarlet, orange, yellow, pink, purplish-pink	10	24	2	3¼		***	*****	*****	*****	-	-
Zinnia (elegans)	Candy Cane	yellow, cream, pink striped with red or orange	9	15	2	3¼		***	*****	*****	*****	-	-
Zinnia (elegans)	Oklahoma Mix	pink, scarlet, yellow, gold, rose	8	23	1	3¼	***	***	*****	*****	*****	-	-
Zinnia (elegans)	Oklahoma Scarlet	scarlet	8	23	1¼	2¼	***	***	*****	*****	*****	-	-
Zinnia (elegans)	Park's Picks Mix	yellow, lilac, rose, light green, red, white, purple	12	27	1½	4	***	***	*****	*****	*****	-	-
Zinnia (elegans)	Small World Pink	pink	11	17	1¼	2¼		*****	*****	*****	*****	-	-
Zinnia (haageana)	Profusion Cherry	cherry red	2¼	13	1¼	2¼	***	***	*****	*****	*****	-	-
Zinnia (haageana)	Profusion Orange	dark orange and yellow-orange	3	14	¼	2¼			*****	*****	*****	-	-
Zinnia (haageana)	Profusion White	white with yellow centers	2	13	¼	2¼	***	***	*****	*****	*****	-	-
Zinnia (haageana)	Star Gold	gold	2	18	1	1¼	***	***	*****	*****	*****	-	-
Zinnia (haageana)	Star Orange	orange	4¼	10¼	¼	2		***	*****	*****	*****	-	-
Zinnia Hybrid	Dreamland Coral	orange	7	23¼	1¼	4	***	***	*****	*****	*****	-	-
Zinnia (peruviana)	Bonita Red	orange-red with chocolate centers	16	38	½	1¼	***	***	*****	*****	*****	-	-
Zinnia (peruviana)	Bonita Yellow	dusky yellow, yellow-orange	9¼	30	¼	1¼	***	***	*****	*****	*****	-	-
Zinnia (tenuifolia)	Red Spider	scarlet	10	25¼	¼	1¼	***	***	*****	*****	*****	-	-

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

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

‡ * indicates less than full bloom and ** indicates full bloom.

Plant ratings²

Flower				Growth habit	Recommended for			Comments
quantity	quality	Foliage	Overall		Fragrance	Cutting	Drying	
3	3	3	3		n		y	Better than 'Crystal White'; short mounding plants covered with blooms; needs deadheading after wet, cold weather
3	3	3	3	Upright, ascending	n	y	y	Excellent strong stems, large flowers, big, bright vibrant colors
4	4	4	4		n	y	y	Uneven plant height, very attractive color, excellent flower size, great stem length for cutting, needs some deadheading
3	4	4	4	Upright, ascending	n	y	y	Variable flower size and color, older flowers faded and unattractive, many petals streaked with dark orange
3	3	3	3		n	y	y	Outstanding color and stem length, very bright colors, variable flower height, nice show late in season
2	2	2	2		n			Interesting striping pattern on petals, not an attractive zinnia, needs deadheading, variable flower height, flowers are misshapen and ragged in appearance, developed over 40 years ago
3	3	3	3		n	y	y	Compact flowers in tight fully double and semi double heads, variable height and flower size, some discolored foliage, some plants diseased, needs deadheading
4	3	3	3		n	y	y	Variable flower height, older flowers ragged, excellent bright red color
3	3	3	3		n	y	y	Fully double, dahlia form blooms, nice stiff stems for cutting
3	3	3	3	Upright, ascending	n	y	y	Very nice compact plant, needs closer spacing than most zinnias
4	4	4	4	Upright, ascending	n	y		Outstanding shiny blooms; plants are covered with color; no maintenance needed; excellent following periods of cold, wet weather; some damage from Sclerotinia cottony rot
4	4	4	4		n		y	Outstanding brilliant flowers, no maintenance, electric mounds that fill in bed well, very ornamental
3	3	3	3		n			Excellent mounds of white flowers, no maintenance, better than Crystal White, larger flowers, nicer display, All America Selection Gold Medal Flower Award for 2001
3	3	3	3		n		y	Excellent cover of gold flowers, no maintenance
4	3	3	3		n	y	y	Bright orange flowers, petite, no maintenance required, nice mounds fill in bed well
4	4	4	4	Upright, ascending	n	y	y	Outstanding flower color, plants are mounds of bright orange, interesting two-toned effect with dark orange older petals and tawny center petals, variable height, stems a little short on some plants for cutting, best orange zinnia, dahlia-form flowers
4	2	2	3		n	y	y	Bushy plant covered with dusky red tiny blooms, fills in bed well and crowds neighbors, muted red color
3	3	3	3		n	y	y	Interesting, bushy zinnia with hundreds of small, dusky yellow flowers; good filler plant, holds up well after periods of cold, wet weather
3	3	3	3		n	y	y	Interesting flower shape, upward, recurved petals, flowers are tiny for size of plant, not showy except in mass plantings

¹0= 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 Test results on completed cultivars

Name	Cultivar	Ave. Overall Rating	Ave. Foliage ht (in)	Ave. Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. Flower Quality	Ave. Flower Quantity
Ageratum	Blue Mink	3.3	1.7	3	5	9.7	0.3	0.4	3.3	3.3
Alyssum	New Apricot	3.7	0.4	3.7	2.8	5.2	0.3	0.3	3.7	3.7
Asclepias	Red Butterfly	2.7	3.7	3	8.5	18	0.5	0.5	3	2.3
Aster	Riviera Mixed	3.7	7.7	3.7	17	25.7	3	4.1	3.7	3.7
Brachyscome	Bravo Formula Mix	3.7	-	3.7	8.2	13.3	0.4	1.3	3.7	3.3
Calendula	Green Heart Orange	3	7.7	3	16.3	26.2	1.7	2.8	3	3.3
California Poppy	Buttermilk	3.3	4.3	3	9.3	16.3	1.2	2.2	3.3	3.3
California Poppy	Purple Glean	3.3	4.7	3.3	9	18.3	1.7	2.1	3.3	3.3
Candytuft	Dwarf Fairy Mix	2	2.7	1	7.8	13.7	0.6	1.1	2	2
Chrysanthemum (coronarium)	Primrose Gem	4	5	4	10.3	26.8	1.2	2.3	4	4
Cleome	Colour Fountain Mixed	3	-	3	32.7	46.3	2.3	2.3	3	3
Dianthus	Floral Lace Lilac	2.7	1.8	2.7	6.7	12.2	1.5	1.9	3	2.7
Dianthus	Melody Pink	3.3	-	3.3	11	25.2	0.8	1.4	3.3	3.3
Dianthus	Raspberry Parfait	2.3	1.7	2.3	3.2	5.5	0.8	1	2.3	2
Foxglove	Foxy	2.7	3	2.7	17.7	32.7	1.3	1.7	2.7	2.7
Gypsophila	Gypsy	4	1.3	3.7	4.9	6.7	0.3	0.4	4	4
Malope	Choice Mix	3.7	-	3.3	22.3	33.7	1.5	3.3	3.7	3.7
Marigold, French	Bonanza Bolero	3	1.3	3	5.7	10.3	1.8	2.7	3	3
Marigold, French	Durango Orange	3.3	2.3	3.3	6.7	9.7	1.6	2.6	3.3	3.7
Marigold, French	Durango Yellow	3	2	3	5.5	9.8	1.3	2.5	3	3.3
Marigold, French	Safari Primrose	3	2	3	4.3	10.2	1.5	2.7	3	3.3
Marigold, French	Safari Red	3.3	2.2	3.3	6.8	10.5	1.6	2.6	3.3	3.3
Marigold, French Triploid	Zenith Red	2	2.3	2	7.5	15.7	1.4	2.8	2	2.3
Marigold, Signet	Lemon Star	2.3	4	2.3	8	17.7	0.7	1.3	2.3	2.3
Mexican Sunflower		3	7.7	2.7	32.2	56	2.2	3.8	3	3
Nasturtium	Jewel Mix	3	22	3	8.3	30	1.6	2.4	3	3.7
Nasturtium	Moonlight	3	11.7	2.7	8.5	18.7	1.7	2.3	3.3	3.3
Nicotiana	Only the Lonely	3	10	2.7	35	53.3	1.5	1.5	3	3
Pausy	Impressions Mix	3.7	4.5	3.7	13.7	19.5	1.4	2.3	3.7	3.7
Petunia	Carpet Blue	2.7	3.3	2.3	8	13	1.8	2.6	3	2.7
Petunia	Carpet Lilac	3	2.7	2.7	6.3	12	1.6	2.2	3	3

*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.

Name	Cultivar	Ave. ¹ Overall Rating	Ave. Foliage ht (in)	Ave. ¹ Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. ¹ Flower Quality	Ave. ¹ Flower Quantity
Petunia	Carpet White	2.3	4.7	2	9.5	13.7	1.8	2.3	2.3	2.3
Petunia	Dreams Midnight Improved	3	3.2	2.7	7	12.5	2.7	3.5	3.3	3.3
Petunia	Dreams Red	3	3.3	3	8.7	14.7	1.8	2.8	3	3
Petunia	Madness Lilac	2.7	4	2.7	8.7	16.8	2	3	2.7	3
Petunia	Madness Royal	3	3.3	2.7	8.3	16.2	1.6	2.8	3.3	3
Petunia	Madness Sheer	1.7	3.7	1.7	11.2	13.7	2	2.7	1.7	1.7
Petunia	Madness Total	3	5.7	3	8	16.3	2.2	3	3	3
Petunia	Prism Sunshine	2.7	6.3	2.3	11.7	18	2	2.8	2.3	2.7
Petunia	Tidal Wave Cherry	3	6.3	3	11.3	30.7	1.4	2.2	3.3	3.7
Petunia	Tidal Wave Hot Pink	3.3	6	3	9.3	25	1.3	2	3.7	4
Phlox	Starry Eyes Mix	2.3	-	2.3	7.7	12.7	0.7	0.8	2.3	2.7
Rudbeckia	Indian Summer	4	4.3	4	22	36.3	3.6	6.2	4	4
Rudbeckia	Rustic Colors	3.3	6	3.3	14.7	29.3	2.5	4.8	3.3	4
Salvia (splendens)	Empire Salmon	2.7		3	9.2	11.8	3.3x3.3	4.8x2	2.7	2.7
Salvia (splendens)	Orange Zest	3.3	5	3	8.3	14.3	4.3x2	8x3	3.3	3.3
Salvia (splendens)	Red Hot Sally	2.7	7.2	2.3	8.2	13.2	4.8x2.4	7.3x3.1	3.3	3.3
Salvia (splendens)	Vista Red	2.3	6.7	2.3	8	13.7	4x2.3	6.7x2.7	2.3	2.7
Sanvitalia	Mandarin Orange	4	2.5	4	7	14	0.8	1.2	4	4
Shasta daisy	Silver Spoons	2.7	6.3	3	15.3	38.2	1.7	3	2.6	2.7
Snapdragon	Black Prince	3.3	3.3	3.3	10.3	20.5	3x2.3	9.3x2.5	3.3	3.3
Snapdragon	Brazilian Carnival	3	5	3	14.5	29.3	5x2.3	10.1x3.5	3.3	3.3
Snapdragon	Hobbit Dwarf Mix	3	6	3	6.3	15.3	2.5x1.5	5x2.8	3	3
Snapdragon	Liberty Cherry	3.3	8	3.3	13	21.7	4.7x2.5	8.7x3.2	3.3	3.3
Snapdragon	Pink Bells	2.7	4	2.7	5.7	14.4	2.3x2.1	2.8x2.5	3	2.7
Snapdragon	Tahiti Mauve	2.7	2.3	2.7	5.3	12.7	2.8x2.3	6x2.7	3	2.7
Statice	Evening Sunset Mixed	2.3	7	2.3	7.8	22.3	0.2	0.3	2.3	2.3
Statice	Sirima	4	5.3	3.7	14.3	30.7	0.2	0.3	4	4
Stock	Legacy Mix	4	8.7	4	12.7	22.2	3.2x1.7	8x2	4	3.7
Sunflower	Giant Sungold	3	13.3	3	54	61	5	9.7	3	3
Sunflower	Soraya	3	13.3	3	42.7	65.7	5.2	6.8	3	3
Sunflower	Titanic	2	-	2	35.7	43	4.3	5.7	2	3

¹0= 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.

Name	Cultivar	Ave. Overall Rating	Ave. Foliage ht (in)	Ave. Foliage Rating	Ave. Min flower ht (in)	Ave. Max Flower ht (in)	Ave. Min Flower Size (in)	Ave. Max Flower Size (in)	Ave. Flower Quality	Ave. Flower Quantity
Venidium	Jaffa Ice	3.3	8.3	3.7	21.3	43	8.2	3.7	3.7	3
Venidium	Orange Prince	3	8.3	3	17	39.3	2.3	3.8	3.3	2.7
Verbena	Moon River	2	5	2	10.3	20.5	0.3	0.3	2	2
Verbena	Quartz Formula Mix	3	2.7	3	6.9	13.3	0.4	0.5	3.3	3.3
Verbena	Quartz Polka Dot Mix	3	3.5	3.3	6.7	13	0.9	1.2	3	2.7
Viola	Four Seasons Golden Yellow	4	5.7	4	7.9	21.8	0.9	1.3	4	4
Zinnia (angustifolia)	Star White	2	3.3	2	3	9	0.6	1.3	2	2
Zinnia (elegans)	Benary's Giant Formula Mix	3	5	3	9.7	24	2.6	4.4	3.7	3
32 Zinnia (elegans)	Benary's Giant Salmon Rose	3.3	6	3.3	16	27.3	2.3	4	3.3	3
	(Blue Point Eldorado)									
Zinnia (elegans)	Blue Point Formula Mix	3	4.7	3	14.3	28	2.4	3.8	3	3.3
Zinnia (elegans)	Oklahoma Mix	2.3	6	2.7	14	26	1.4	3.4	2.3	3
Zinnia (elegans)	Oklahoma Scarlet	2.3	6.3	2.7	10.7	29.3	1.3	2.4	2.3	3
Zinnia (elegans)	Small World Pink	3	4.7	3	10.3	17.3	1.4	2.3	3	3
Zinnia (haageana)	Star Gold	3	3.3	3	5.3	13	1	1.8	3.3	3
Zinnia (haageana)	Star Orange	3.7	2.7	3.7	6.8	12.2	1	1.8	3.7	4

Special thanks to our business partners who support the Garden with seeds and other donations.

Ball Seed	Box 335 West Chicago, IL 60185	Experimental Flower Seeds
Geo W. Park Seeds	2 Parkton Ave., Greenwood SC 29649	Experimental Flower and Vegetable Seeds
Hardy Fern Foundation	Box 60034 Richmond Beach, WA 98160	Experimental Ferns- live plants
Harris Seeds	PO Box 24966, Rochester NY 14624-0966	Experimental Flower and Vegetable Seeds
Johnny's Selected Seeds	1 Foss Hill Road, Albion, ME 044910	Experimental Flower and Vegetable Seeds
Larry Duffy	7.2 Mile Chena Hot Springs Road	Experimental Plants
PanAmerican Seeds	P.O. Box 438 West Chicago, IL 60186	Experimental Flower Seeds
Risse Greenhouses	981 Risse Road, Fairbanks, AK 99712	Plant donations, supply discounts
Stokes Seeds	PO Box 548 Buffalo, NY 14240	Experimental Flower and Vegetable Seeds
Thompson & Morgan Seed Co.	Box 1308 Jackson, NJ	Experimental Flower and Vegetable Seeds
Twilley Seeds	121 Gary Rd. Hodges, SC 29653	Experimental Flower and Vegetable Seeds
USDA Plant Introduction Stations-	NC7 Ames, Iowa	Plant and seed donations

* 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 Sources:

- Alaska Greenhouse, 1301 Muldoon Rd., Anchorage AK 99514
*Alaska Native Plant Society, PO Box 141613, Anchorage AK 99514
Alberta Nurseries & Seeds Ltd., Box 20, Bowden Alberta TOM 0K0
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., Arvada 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 Road, 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 Road, Fairbanks AK 99712
Clause Seed, 100 Breen Rd., San Juan Bautista CA 95045
Connell's Dahlias, 10616 Waller Road East, Tacoma WA 98446
Cook's Garden, PO Box 535, Londonderry VT 05148
Dachfeldt, Box 947, Albany OR 97321
de Jager Bulb Co., PO Box 2010, So. Hamilton MA 01982
Denali Seed, P.O. Box 111425, Anchorage AK 99511
Dinkel's Fairview Nurser, HC 31 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 Street, Fairbault MN 55021
F.W. Schumacher Co., Inc., 36 Spring Hill Rd., Sandwich MA 02563
Fred C. Gloeckner & Co., Inc., 15 East 26th St., New York NY 10010
Gardens North, 5984 Third Line Road North, North Gower Ontario K0A 2T0 Canada
Germania Seed Co., 5978 North Northwest Hwy, Chicago IL 60631
Gilbert H. Wild & Sons, PO Box 338, Sarexio MO 64862
Guernsey Seed & Nursery Co., 110 Capital St., Yankton SD 57079
H.G. German Seeds, Inc., 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, Ontario LOR2H1 Canada
Ion Exchange, 1878 Old Mission Drive, 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
Knight Hollow Nursery, 236 East Sunset Ct., Madison WI 53705
Lamb Nurseries, 101 E. Sharp Ave., Spokane WA 99202
Lawyer Nursery, 950 Highway 200 West, Plains MT 59859
Liberty Seed Co., PO Box 806, New Philadelphia OH 44663
McClure & Zimmerman, PO Box 368, Friesland WI 53935
Mountain Seed & Nursery, Box 271 Route 1, Moscow ID 83843
*New England Wildflower Society, 180 Hemenway Road, Framingham MA 01701
Nichols Garden Nursery, 1190 North Pacific Hwy, Albany OR 97321
Nourse Farms, Inc., Box 485 R.F.D., South Deerfield MA 01373
Otis S. Twilley Seed Co., Inc., PO Box 65, Trevose 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, Goodwood Ontario L0C 1A0 Canada
Roseaie at Bayfields, Box R, Waldoboro ME 04572
Royal Sluis, Inc., 1293 Harkins Road, Salinas CA 93901
Rupp Seeds, Inc., 17919 County Road B, Wauseon OH 43567
Seeds of Alaska, Box 3127, Kenai AK 99611
Seeds of Change, PO Box 15700, Santa Fe NM 87501
Seeds of Distinction, PO Box 86 Station A, Toronto Ontario M9C 4V2 Canada
Seedway, Inc., PO Box 250, Hall NY 14463
Select Seeds, 180 Stickney Hill Rd., Union CT 06076
Seymour's Selected Seeds, P O Box 1346, Randolph WI 53956
Shepherd's Garden Seeds, 30 Irene St., Torrington CT 06790
Sluis & Groot of America, 124A Griffin St., Salinas CA 93907
Smith Nursery Co., Box 515, Charles City IA 50616
T & T Seeds, Ltd., Box 1710, Winnipeg Manitoba R3C 3P6 Canada
Territorial Seed Co., PO Box 157, Cottage Grove OR 97424
Valley Nursery, Box 4845, Helena MT 59604
Van Bloem USA, Inc., 500 Pendley Industrial Park, Cumming GA 30130
Vans Pines, 7550 - 144th Ave., West Olive MI 49460
Vaughan's Seed Co., 5300 Katrine Ave., Downers Grove IL 60515
Vermont Bean Seed Co., Garden Lane, Fair Haven VT 05743
Vermont Wildflower Farm, P O 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
Waushara Gardens, N 5491 5th Drive, Plainfield WI 54966
Wayside Gardens, 1 Garden Lane, 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 Yukon
William Dam Seeds, PO Box 8400, Dundas Ontario L9H 6M1 Canada
*Seeds available to members through seed exchange programs

Acknowledgments

Without our dedicated volunteers, continued growth and success of the Georgeson Botanical Garden would not be possible. A big thank you to our 2001 volunteers!

University Park second grade students and teachers, Robyn Amundson, Dan Baum, Kathie Baum, Patrick Baum, Karen Binkley, E. Douglas Blankenship, Elizabeth Brown, Bev Byington, Jean Coghill, Barbara Colburn, Carol Colp, Kathleen Davis, Susan Dearborn, Donna Dinsmore, Rae Dinsmore, Cathy Drury, Catherine Egan, Barbara Fay, Jack Finch, Sheila Finch, Gayle Garrigues, Ginger Gauss, Mary Huddle, Sandra Jennings, Joanne Klumb, Kelly Lawhead, Sherry Lewis, Susan Lightbody, Susan Logue, Marian Lundquist, Mary MacCheyne, Tracey Martinson, Lauren Matheke, Mara Matheke, Valerie Matthew, Alyce McEwen, Andrea McEwen, Kathleen McKnight, Mossy Mead, Rose Meier, Brenda Naber, Debra Neumayr, Miriam Paguin, Irene Peyton, Leonard Peyton, Betty Pixley, Heidi Rader, Ann Roberts, Judy Romans, Barbara Rondinc, Lu Rowinski, Kathy Seim, Olen Seim, Ann Sherman, Ann Swift, Leslie Teders, Chris Terzi, Nancy Thomas, Bob Van Veldhuizen, Jacob Van Veldhuizen, Matthew Van Veldhuizen, Eileen Van Wyhe, Nancy Veitch, Judy Weber, Sandy Westcott, Margaret Wiedeman, Kathy Williams, Chinook Charter School

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



The University of Alaska Fairbanks provides equal education and employment opportunities for all, regardless of race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, marital status, changes in marital status, pregnancy or parenthood pursuant to applicable state and federal laws.

No endorsement of products or firms mentioned is intended, nor is criticism implied of those not mentioned. Material appearing herein may be reprinted provided no endorsement of a commercial product is stated or implied. Please credit the researchers involved and the Agricultural and Forestry Experiment Station, School of Agriculture and Land Resources Management, University of Alaska Fairbanks.