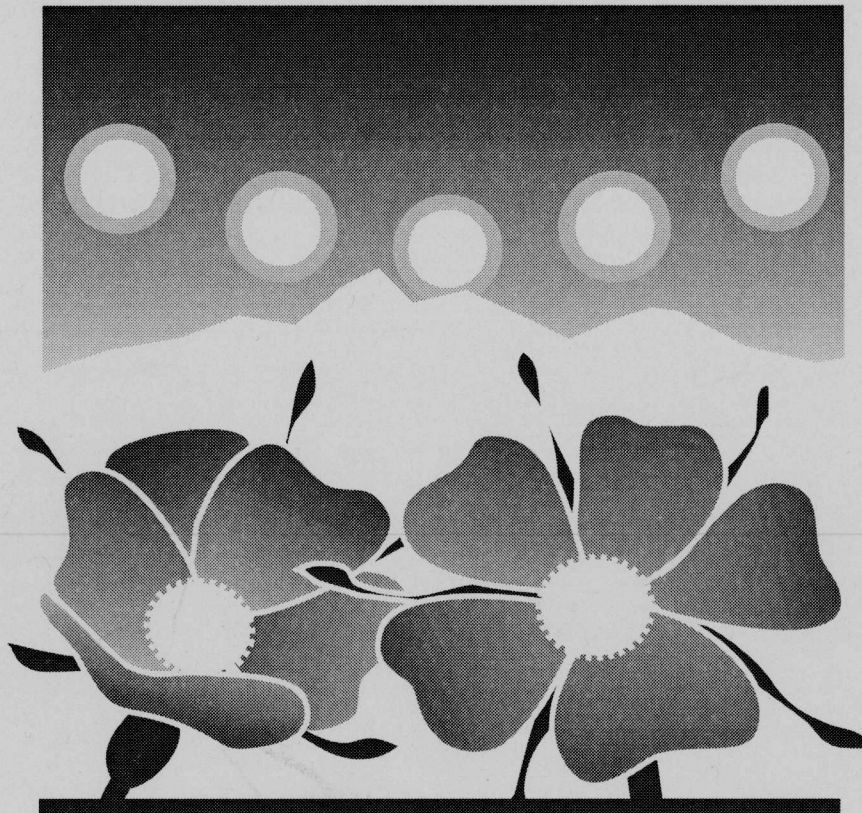


"Circular (University of Alaska, Fairbanks, Agricultural and Forestry
Experiment Station)"

Annual Flower Plant Evaluations 1999



**GEORGESON
BOTANICAL GARDEN**

by

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School of Agriculture and Land Resources Management
University of Alaska Fairbanks

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November 1999

Introduction

The annual flower trials were planted from 30 May through 4 June, 1999 in the Perennial Landscape and All America Selections Display Garden of the Georgeson Botanical Garden (64°51N, 147°52W). Fairbanks silt loam soil was fertilized with 10–20–20S (4 lbs per 100 sq feet, 195 g per sq meter) on 28 May. With the exception of dahlias, all flowers were grown as seedling transplants and were hardened off outdoors for one week prior to transplanting. Tuberos roots of dahlias were planted in containers five weeks prior to transplanting and were hardened off.

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 18 June to all plots. Plots were irrigated as needed throughout the summer. A fungicide treatment (Topsin M®, Thiophanate-methyl) was applied on 14 and 15 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 diseases, insect pests, seed pods, off-type plants, and other deformities. From 25 July to 10 August, each cultivar was measured for plant height and flower size, rated for performance of flowers and foliage, and evaluated for fragrance and potential as cut flowers or in dried arrangements. Frost tolerance was not evaluated in 1999 because frost did not injure plants until snowfall at the end of September.

Weather data are 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 29 May (31°F, -0.5°C). Although the first temperature below freezing was recorded on 11 September (31°F, -0.5°C), very little damage occurred to the flower garden. Most plants continued to bloom profusely until 27 September. The growing season was fairly typical for Fairbanks (Table 1). The degree day accumulation was slightly above average for Fairbanks when compared to a previous ten-year average of 3234 degree days. The ten-year average frost free season is 102 days compared to 105 days for 1999. Although low-lying areas around

Fairbanks experienced frost in early September, the Garden and surrounding hillsides had an extra month of bloom time. It was an excellent season for growing flowers in the Georgeson Botanical Garden.

Acknowledgements

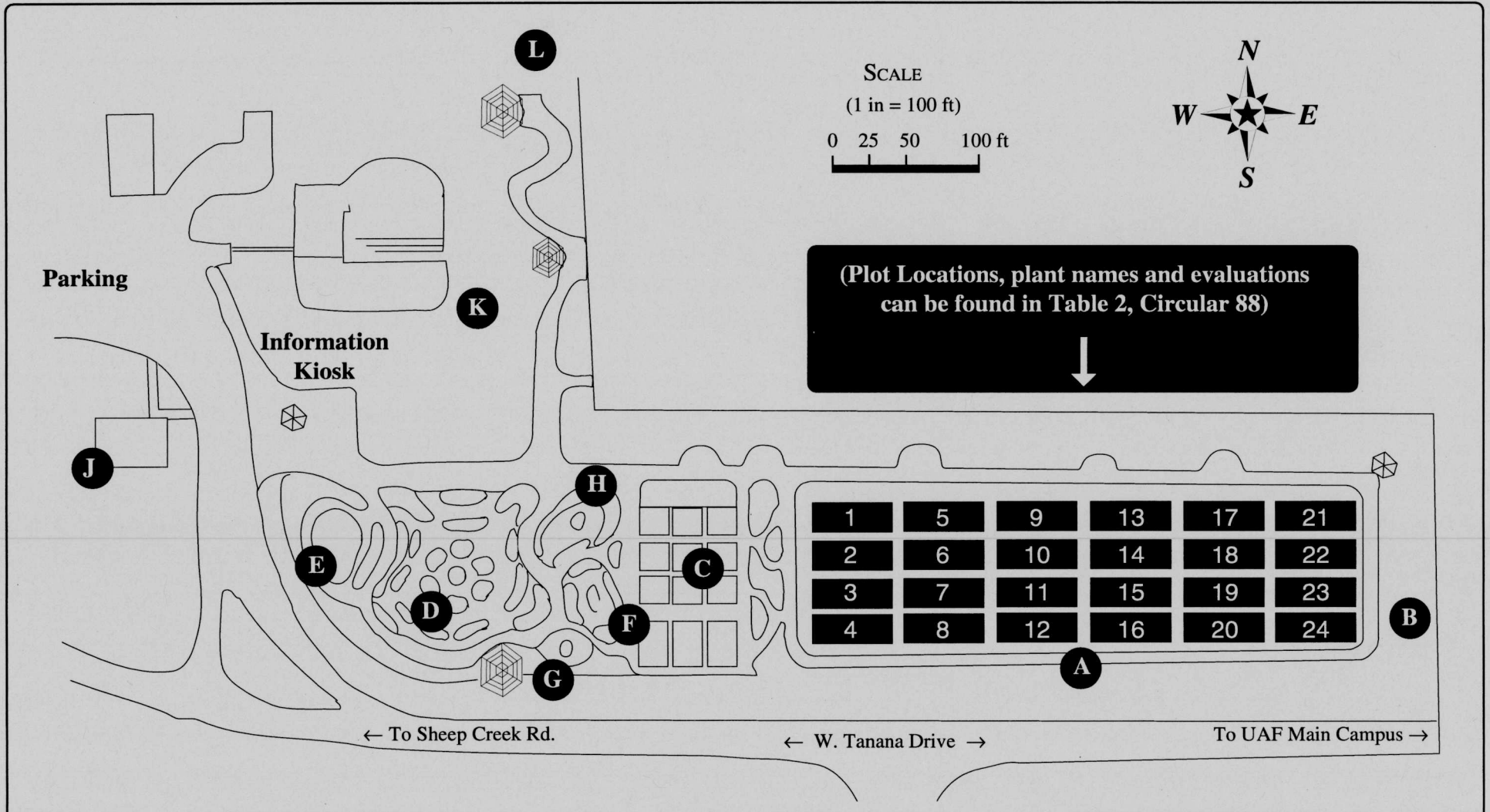
We gratefully acknowledge the assistance of the following employees and volunteers who helped plant and maintain the test gardens:

Adult Learning Programs of Alaska volunteers; Second Grade Classes — University Park Elementary School, Mrs. Angaiak, Mrs. Bell, Mrs. Ferri, Mrs. Harrison; Rachel Barta, Lynn Bundy, Susan Carmen, Leanne Converse, Kathy Davis, Susan Dearborn, Tone Deehr, Donna Dinsmore, Cali Dinstel, Catherine Egan, Barbara Fay, Wanda Fields, Sheila Finch, Etta Gardiner, Gayle Garrigues, Ginger Gauss, Evan Gibson, Marcia Ives, Lou Killion, Joanne Klumb, Martha Kopplin, Kelly Lawhead, Sherry Lewis, Hope Lockwood, Tracey Martinson, Eric Meyer, Lisa Neumath, Deb Neumayr, Ria Peep, John Phillips, Julia Quist, Lou Rowinski, Tama Rucker, Cameron Segla, Kathy Seim, Olin Seim, Ann Swift, Bob Van Veldhuizen, Jacob Van Veldhuizen, Matt Van Veldhuizen, Keith Wagner, Gail Walters, Judy Weber, Frank Yaska.

Table 1. Weather data for 1999

	May	June	July	August	September
Average daily max. °F	58	73	72	69	56
Monthly high temp. °F	70	91	85	87	68
Average daily min. °F	34	49	50	46	34
Monthly low temp. °F	28	35	41	33	16
Rainfall (inches)	0.32	2.12	2.06	1.89	2.27
Last Spring frost	29 May				
First Fall frost	11 September				
Frost free days	105				
Thaw degree days	3383				

Map of the Georgeson Botanical Garden.



- | | | |
|--|---|-------------------------------------|
| A Herbaceous Perennial and Woody Ornamental Test Gardens | E Spring Colors and Low Maintenance Garden | J Visitors' Center |
| B Demonstration Conservation Windbreak | F Herb Garden | K Alaska Native Plant Garden |
| C Vegetable and Fruit Demonstration Garden | G Cutting Garden | L Boreal Forest Nature Trail |
| D Perennial Landscape and All America Selections Display Garden | H Shade and Water Garden | |

Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																	
			min	max	min	max	Jun		Jul		Aug		Sep											
Ageratum	Blue Bouquet	blue	18	24	-	¼			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ageratum	Blue Mink	blue	8	9	-	¼			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ageratum	Red Top	burgundy buds, reddish purple flowers	10	21	-	¼			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ageratum	Southern Cross	powder blue	9	14	-	½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Agrostemma	Ocean Pearls	white	18	24	2	2½			*	*	*	*												
Agrostemma	Purple Queen	rose	18	24	-	1½			*	*	*	*	*											
Alyssum	Carpet of Snow	white	14	17	-	¼	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Alyssum	New Apricot	apricot	4	6	-	¼	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Amaranth	Elephant Head	dark red	-	14	-	7x3						*	*	*	*	*	*	*	*	*	*	*	*	*
Amaranth	Pygmy Torch	red	-	17	8x3	11x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Asclepias	Red Butterfly	orange and yellow	10	19	-	½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Aster	Riviera Mixed	purple, pink, rose, lavender, white, yellow	12	22	3	4					*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bachelor's Button	Blue Boy	blue	14	24	-	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Blue Lace Flower	Madonna Mix	pink, lavender	18	22	1½	2					*	*	*	*	*	*								
Brachycome	Bravo Formula Mix	blue, white, purple, pale blue with black or yellow centers	10	12	-	1			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calendula	Calypso Orange/ Black Center	yellow-orange with dark brown centers	8	14	2	2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calendula	Green Heart Orange	yellow-orange with orange centers	13	28	1½	2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calendula	Kablouna Golden Sunset Improved	orange with yellow centers	20	24	1½	2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calendula	Pink Surprise	apricot tinged with pink and light brown centers	14	23	1½	2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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

^xif 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	
3	3	3	3	Upright, ascending	n	y	y	Tall, erect stems for cutting, small flower clusters
3	3	3	3	Compact, mounding	n	y	y	Variable plant height, uneven mounding habit
4	4	4	4	Upright, ascending	n	y	y	Interesting flower color, flowers start out burgundy and open to a reddish purple, looks two toned
4	4	4	4	Upright, ascending	n	y	-	Compact plants, flowers are interesting two-tone color
1	2	2	2	Open, sprawling	n	-	-	Lanky, spreading, open plants with very nice blooms, best grown in mix, finishes early, not much show after the end of June, 1997 Fleuroselect Medal Winner
1	2	2	2	Open, sprawling	n	-	-	Lanky, spreading, open plants with very nice blooms, best grown in mix, finishes early
3	2	3	3	Compact, mounding	y	-	-	Uneven plant height late in season, looks ragged, excellent fragrance
4	4	4	4	Compact, mounding	y	-	-	Excellent color, works well with salmon-colored flowers
3	3	3	3	Upright, ascending	n	y	y	Expected giant plants five-foot with large heads, instead plant was barely visible, nice spiky heads
3	3	3	3	Upright, ascending	n	y	y	Attractive spikes, shorter than catalog description
2	3	2	2	Open, sprawling	n	y	-	Sparse flowers, needs close spacing to fill in space, excellent color, good accent plant
4	4	4	4	Upright, ascending	n	y	-	Outstanding late season color mix, late to bloom but worth the wait
2	3	2	2	Upright, spreading	y	y	y	Early season bloom, ragged appearance late in season, best grown in mix with other flowers
1	1	1	1	Upright, spreading	n	-	-	Weak, floppy stems, overwhelmed by neighboring plants
3	3	3	3	Upright, spreading	n	-	-	Uneven mounds, each plant color a different size
3	3	2	3	Upright, ascending	y	y	-	Needs deadheading, declines by mid-August
3	3	3	3	Upright, ascending	y	y	-	Needs deadheading, bright flowers, lime green center not prominent as advertised
3	3	3	3	Upright, ascending	n	y	-	Needs deadheading more than other calendulas, did not have the crested blooms described in catalog
4	4	4	4	Upright, ascending	sl	y	-	Very ornamental "pink" calendula, the best calendula grown this year, needs deadheading, inner petals a creamy light orange-yellow, outer petals a darker orange, whole effect is a pink tinge

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																	
			min	max	min	max	Jun			Jul			Aug			Sep								
Calendula	Touch of Red Mix	yellow, orange, pink	16	24	1	2½	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*		
California Poppy	Ballerina	peachy pink when closed	7	15	1½	2	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*		
California Poppy	Masquerade	yellow/orange when open																						
California Poppy	Buttermilk	creamy yellow	13	17	1½	2	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*	☼	
California Poppy	Purple Gleam	rose with cream centers	12	16	-	2	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*	*	
Candytuft	Dwarf Fairy Mix	lavender, white	12	17	-	¼	*	*	*	☼	☼	☼	*	*										
Carnation	Grenadin	pink, red, white, apricot, red/white stripe	-	8	1½	2					*	*	*	☼	☼	☼	☼							
Carnation	Lillipot Mix	coral, red, pink (probably more)	16	27	1¼	2½							*	*	*	*	*	*	*	*	*	*	*	
Carpanthea	Golden Carpet	yellow	8	8	2	2½					*	*	☼	☼	☼	☼	☼	☼	☼	☼	*	*		
Celosia	Red Glow	red	-	9	-	3x2					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*	
Centaurea	Alaska	white	18	40	2½	4½					*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	
Centaurea	Dairy Maid	yellow	-	8	1	1½	*	☼	☼	☼	☼	☼	*	*										
Chilean Glory Vine	Fireworks	pink, orange, yellow orange	-	96	-	1				*	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Chrysanthemum	Charmer	white/yellow centers	19	36	-	1					*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Chrysanthemum	Primrose Gem	creamy yellow with dark yellow centers	13	30	1	2¼	*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*	*	
Chrysanthemum	Silver Spoons	white/yellow centers	20	40	2	3				*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	
Cleome	Colour Fountain Mixed	rose, pink, white, lavender-pink	46	54	-	3					*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	
Coreopsis	American Dream	pink/yellow centers	12	15	-	1				*	*	☼	*	*	*	*	*	*	*	*	*	*	*	
Cosmos (<i>bipinnatus</i>)	Sensation Mix	rose, white, pink, magenta	26	45	2	4			*	*	*	*	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	
Cosmos (<i>bipinnatus</i>)	Sonata Pink Blush	pink with yellow centers	20	28	2½	3							*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	

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^y* indicates less than full bloom and ☼ indicates full bloom.

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall			Fragrance	Cutting	Drying	
quantity	quality								
3	2	2	2		Upright, ascending	sl	y	-	Not the best calendula, ragged when not deadheaded, interesting dark red margins on petals, some discolored foliage
3	3	3	3		Upright, spreading	n	y	-	Advertised as the color of peach flesh, actually much darker, outstanding color, crinkled flowers
3	3	3	3		Upright, spreading	n	y	-	Outstanding flower color, closes up in cloudy weather
4	4	4	4		Upright, spreading	n	y	-	Outstanding flower color, closes up in cloudy weather
3	3		3		Upright, spreading	n	y	-	Interesting early season color but blooms finished in midseason, covered with seed pods by midseason, interesting green seed pods
1	1	1	1		Compact, mounding	y	n	-	Needs deadheading, flowers rot easily in wet weather, much shorter than two-foot catalog height
1	1	4	2		Compact, mounding	y	y	-	Blue-green foliage forms beautiful, ornamental mounds, blooms are sparse and too late
3	2	2	2		Compact, spreading	n	n	n	Interesting feathery flowers, needs deadheading after rain
2	3	2	2		Upright, ascending	n	n	-	Tiny plants, not showy, needs close spacing to fill area
3	4	3	3		Upright, spreading	y	y	-	Large white flowers in mid to late season, does not bloom all at once, the flower buds are very ornamental with interesting netted pattern, stems lanky, spreading, needs support
1	1	1	1		Open, sprawling	n	n	-	Unusual yellow flowers, but floppy stems, sparse flowers, died out in midseason
3	3	4	3		Vine	n	y	-	Outstanding vine, grows as fast as scarlet runner bean and has beautiful dark green dissected foliage, feathery tendrils, very ornamental
3	2	3	1		Upright, spreading	n	y	-	Uneven plant height and tiny flowers, nothing charming about this one, ragged appearance
4	4	4	4		Upright, ascending	sl	y	-	Large bushy plants with abundant blooms, some single petals, most double-petaled, needs late season deadheading
2	2	3	2		Upright, ascending	n	y	-	The spoon-type petals do not occur on every flower or within the same flower, uneven height
3	3	3	3		Upright, ascending	n	y	-	Very nice midseason blooms, excellent mix of colors
1	1	2	1		Upright, ascending	n	-	-	Short feathery plant with tiny pink flowers, not very showy, best used as filler like baby's breath
3	3	3	3		Upright, ascending	n	y	-	Excellent flowers and foliage, tall stems for cutting
3	3	3	3		Upright, ascending	y	y	-	Reliable midheight cosmos covered with blooms in late season

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y															
			min	max	min	max	Jun	Jul	Aug	Sep												
Cosmos (<i>bipinnatus</i>)	Versailles Carmine	carmine rose	36	40	1½	4½				*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Cosmos (<i>sulphureus</i>)	Cosmic Orange	yellow-orange	12	22	1½	2¼		*	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*		
Cosmos (<i>sulphureus</i>)	Ladybird Yellow	yellow	10	28	-	2	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Cosmos (<i>sulphureus</i>)	Lemon Twist	yellow	12	22	-	1	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	
Cosmos (<i>sulphureus</i>)	Sunrise	orangish-yellow	10	16	2	2½		*	*	*	☼	☼	☼	*	*	*						
Cynoglossum	Blue Shower	blue	24	27	¼	½		*	*	*	☼	☼	☼	☼	☼	☼	☼	*	*	*		
Cynoglossum	Firmament	blue	10	12	-	¼		*	*	*	☼	☼	*									
Dahlia	Ala Mode	peach with white tips	-	46	5	6							*	☼	☼	☼	☼	☼	☼	*		
Dahlia	Calico Mix	yellow, white, orange, red, carmine	15	24	2½	3½	*	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	*	*	*	
Dahlia	Figaro	yellow, rose, white, light orange, pink	15	21	2½	5	*	*	*	*	☼	☼	☼	☼	☼	☼	☼	☼	*			
Dahlia	Golden Heart	orange-red and yellow	-	36	4	6						*	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Keewatin Pioneer	red and yellow	-	34	4	5½					*	☼	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Kellie Ann	white with lavender tips	-	47	-	-						*	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Kidd's Climax	pink fading to white in centers	-	41	5	9						*	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Lemon Meringue	yellow with white tips	-	36	4	6						*	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Lisa		-	28	-	-																
Dahlia	Mary	lavender tips, white base	-	43	7	8						*	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Orange Jewel	light orange	-	40	3½	5					*	☼	☼	☼	☼	☼	☼	☼	☼	*		
Dahlia	Paroa Gillian	yellow with orange tips	-	38	4	5						*	☼	☼	☼	☼	☼	☼	☼	*		
Dianthus	Diamond Blush Pink	white, dark pink, light pink	8	10	1	1½	*	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	☼	*	*	*	*

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^y* indicates less than full bloom and ☼ indicates full bloom.

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall			Fragrance	Cutting	Drying	
quantity	quality								
2	3	3	2		Upright, ascending	sl	y	-	Late to bloom, lots of foliage, sparse flowers even in mid-August, nice flower size
4	3	2	2		Upright, ascending	n	n	-	Needs deadheading to prevent seed pods from developing by midseason, looks very ragged late in season, All America Selections Award 2000
3	2	2	2		Upright, spreading	n	y	-	Flowers have bursts of bloom all season, looks ragged and needs deadheading from mid-July
2	1	1	1		Upright, spreading	n	n	-	Ragged appearance after first flush of blooms, not attractive
2	2	2	2		Upright, ascending	n	y	-	Nice early in season but becomes ragged and seedy later
3	3	2	3		Open, sprawling	n	y	-	Bare stems late in season, attracts honeybees
2	2	2	2		Spreading, open	n	n	n	Open, spreading, nice as accent
2	3	3	2		Upright, ascending	n	y	-	Small, sparse flowers, nice tall stems
3	3	3	3		Upright, ascending	n	y	-	Attracts bees, good mix of colors
3	3	3	3		Upright, ascending	n	y	-	Good mix of colors, abundant flowers all season
4	3	3	3		Upright, ascending	n	-	-	Abundant midsize blooms, semicactus, very attractive
2	2	2	2		Upright, ascending	n	y	-	Small semicactus blooms, not the most spectacular
1	3	3	1		Upright, ascending	n	-	-	Large semicactus, late to bloom, one flower by 8/15/99
2	3	3	3		Upright, ascending	n	y	-	Huge flowers, but few in number
3	3	3	3		Upright, ascending	n	-	-	Small abundant flowers, nice color
-	-	1	1		Upright, ascending	-	-	-	Short, stubby, no blooms, was crowded out by more vigorous dahlias
3	4	3	3		Upright, ascending	n	y	-	Decorative dahlia with a medium flower size, very showy
4	4	4	4		Upright, ascending	n	y	-	Covered with blooms, very nice small orange blooms
2	2	2	2		Upright, ascending	n	y	-	Lots of buds late in season but show is not spectacular, interesting flower color, incurved cactus
3	3	3	3		Upright, ascending	sl	y	-	Excellent multicolored mix

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																	
			min	max	min	max	Jun			Jul			Aug			Sep								
Dianthus	Floral Lace Crimson	red	10	12	1½	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Floral Lace Light Pink	pink with rose markings	9	11	-	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Floral Lace Lilac	rose	12	16	-	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Floral Lace Picotee	rose centers with white edges	7	10	1¼	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Floral Lace True Rose	rose	10	12	1¼	1¾	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10 Dianthus	Floral Lace Violet	dark rose	9	12	1¼	1¾	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Floral Lace White	white	7	13	1	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Ideal Pink	rose pink	9	16	1¼	1½				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Melody Pink	pink	14	29	¾	1½				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Raspberry Parfait	rose/pink bicolor with burgundy centers	7	9	1¼	1½				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dianthus	Velvet 'N Lace	burgundy with white margins	9	18	1	2				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Eucnide	Golden Tassel		-	-	-	-																		
Flowering Cabbage	Tokyo Pink	pink edged foliage, some white markings	18	22	-	-																		
Flowering Cabbage	Tokyo White		18	24	-	-																		
Foxglove	Foxy	rose, pink, cream	26	52	2	2½					*	*	*	*	*	*	*	*	*	*	*	*	*	*
Gaillardia aristata	Burgundy Wine	orange-red with yellow centers	16	24	2	3					*	*	*	*	*	*	*	*	*	*	*	*	*	*
Gazania	Daybreak Mix	yellow, orange	12	16	2½	3					*	*	*	*	*	*	*	*	*	*	*	*	*	*
Gazania	Daybreak Pink Shade	rose centers fading to light pink at tips	15	17	2½	3					*	*	*	*	*	*	*	*	*	*	*	*	*	*
Gazania	Daybreak White	white with yellow centers	-	8	2	3					*	*	*	*	*	*	*	*	*	*	*	*	*	*
Gazania	Red Stripe	gold with dark brown stripes	10	13	2	3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall	Fragrance		Cutting	Drying		
quantity	quality								
3	3	3	3	Upright, ascending	sl	-	-	Needs deadheading, use closer spacing than most dianthus	
2	2	2	2	Upright, ascending	n	-	-	Poor cover, lots of space between plants, needs deadheading	
3	3	3	3	Upright, ascending	sl	y	-	Needs some deadheading	
2	3	3	3	Upright, ascending	n	-	-	Needs deadheading, space closer together for better show	
3	2	3	2	Upright, ascending	n	-	-	Needs deadheading, some true red dianthus in mix	
3	3	3	3	Upright, ascending	n	-	-	Needs deadheading, clear dark rose red color, appears two toned	
4	3	3	3	Upright, ascending	y	-	-	Needs deadheading, flowers turn brown in rain, good cover	
3	3	3	3	Upright, ascending	n	y	-	Fills in bed well, needs deadheading late in season, good color all season	
4	4	4	4	Upright, ascending	y	y	-	Taller than most dianthus, abundant flowers, wonderful spicy fragrance, variable flower height, minor deadheading needed, All American Selections Winner 2000	
2	3	3	3	Compact, mounding	sl	-	-	Needs deadheading, nice bicolor pink flowers	
3	3	3	3	Upright, ascending	n	y	-	Very nice burgundy flowers trimmed with white edging, small very ornate flowers on strongly upright stems, needs deadheading	
-	-	3	1	Compact, spreading	-	-	-	No flowers, nice foliage, but not worth growing	
-	-	3	3	Upright, mounding	-	-	-	Not the most ornamental flowering cabbage we have tried, nice pink color develops late in season	
-	-	3	3	Upright, mounding	-	-	-	Not the most ornamental flowering cabbage we have tried	
4	4	4	4	Upright, ascending	n	y	-	Gorgeous blooms, late to bloom but worth it, attracts honey bees, bumblebees, bee flies	
2	3	3	2	Upright, ascending	y	y	-	Nice big flowers, uneven blooming times	
4	4	3	4	Upright, ascending	n	-	-	Closes up in cloudy weather, beautiful show when open	
3	3	3	3	Upright, ascending	n	-	-	Closes up in cloudy weather, nice color	
3	3	3	3	Upright, ascending	n	-	-	Closes up in cloudy weather	
3	3	3	3	Upright, ascending	n	-	-	Interesting striped petals, closes up in cloudy cold weather, Fleuroselect Gold Medal Winner	

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y											
			min	max	min	max	Jun			Jul			Aug			Sep		
Geranium	Freckles	pink with rose markings	10	14	-	¼	* * * * * * * * * * * * * *											
Geranium	Glamour Rose Pink	pink	12	16	-	1	* * * * * * * * * * * * * *											
Godetia	Satin Mix	apricot, pink, rose, lavender	9	11	1½	2	* * * * * * * * * * * * * *											
Gypsophila	Covent Garden	white	12	16	-	¼	* * * * * * * * * * * * * *											
Gypsophila	Gypsy	pink	-	9	-	¼	* * * * * * * * * * * * * *											
Gypsophila	Lady Lace	white	10	12	-	¼	* * * * * * * * * * * * * *											
Helichrysum	Chico Orange	yellow/orange	7	12	1	1½	* * * * * * * * * * * * * *											
Helichrysum	Chico Red	red/yellow centers	-	7	-	1	* * * * * * * * * * * * * *											
Lavatera	Beauty Mix	white, pink, rose	16	21	2	2½	* * * * * * * * * * * * * *											
Linaria	Fantasy Blue	lavender	12	14	-	½	* * * * * * * * * * * * * *											
Livingstone Daisy	Lemon Soda	purplish pink	-	5	1	1¼	* * * * * * * * * * * * * *											
Malope	Choice Mix	rose, white, crimson with dark burgundy veins	36	40	1¼	3½	* * * * * * * * * * * * * *											
Marigold, African	Atlantis Mix	yellow and yellow-orange mix	9	12	2	4	* * * * * * * * * * * * * *											
Marigold, African	Discovery Orange	yellow-orange	7	9	2	4	* * * * * * * * * * * * * *											
Marigold, African	Mesa Gold	gold	-	8	1½	4	* * * * * * * * * * * * * *											
Marigold, African	Mesa Yellow	yellow	-	11	2	3½	* * * * * * * * * * * * * *											
Marigold, African	Snowball	yellowish white	11	15	2	3½	* * * * * * * * * * * * * *											
Marigold, African	Sweet Cream	creamy white	13	19	2	3½	* * * * * * * * * * * * * *											
Marigold, French	Bonanza Bolero	orange, gold and yellow with red markings	8	13	1½	2½	* * * * * * * * * * * * * *											

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

Plant ratings ^a					Growth habit	Recommended for			Comments
Flower		Foliage	Overall	quantity		quality	Fragrance	Cutting	
2	3				2		2	Compact, mounding	sl
3	3	3	3	Upright, ascending	sl	y	-	Needs deadheading, ragged appearance in late summer	
2	3	3	3	Compact, mounding	n	y	-	No doubt one of the most attractive and asked about flowers in the garden, needs cleanup after rain, flowers get soggy and limp, needs deadheading to keep blooms coming	
2	2	1	1	Upright, spreading	n	y	-	Very poor show, blooms early then dies out completely in July, must be planted in succession or in a mix for best results	
4	4	4	4	Compact, mounding	n	-	-	Excellent mounds covered with tiny blooms all summer, no maintenance, All America Selections Winner 1997	
2	1	1	1	Open, sprawling	n	y	-	Bloomed early and died, must be sown in succession or in a mix, not showy alone	
4	3	3	3	Compact, mounding	n	n	y	Compact plants covered with blooms, holds up well all season	
3	2	3	3	Compact, mounding	n	n	y	Tiny mounded plant covered with flowers, many flowers rotted late in season	
3	2	3	2	Upright, ascending	sl	-	-	Needs deadheading, white flowers look ragged when old, good color mix	
4	3	3	3	Compact, mounding	n	-	-	Very nice mounds covered with blooms, attracted attention early in season when other flowers just getting started, needs deadheading late in season	
3	3	3	3	Compact spreading ground cover	n	-	-	Most not yellow but hot pink, very bright, eye-catching, closes up in cloudy weather	
3	3	3	3	Upright, spreading	n	-	-	Attractive flowers, weak stems give sprawling habit	
4	3	3	3	Compact, mounding	y	-	y	Nice mix of colors, abundant large blooms, needs deadheading	
4	2	3	3	Compact, mounding	y	-	y	Heads rot and turn brown in rain, needs late season deadheading, excellent flower size	
3	4	3	3	Compact, mounding	sl	-	y	Large flowers on stubby plants, incredibly even height	
3	2	3	3	Compact, mounding	y	-	y	Huge flower balls on crowded stems, need deadheading to remove rotten flowers, doesn't do well in rainy weather	
4	3	3	3	Upright, ascending	y	-	y	Fading flowers covered with purplish spots then they rot, needs deadheading	
3	2	3	3	Upright, ascending	y	y	y	Older flowers turn brown in centers in wet weather, needs deadheading	
3	3	3	3	Compact, mounding	y	y	y	Needs deadheading, variable plant height, striking colors, All America Selections Bedding Plant Award 1999	

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y											
			min	max	min	max	Jun			Jul			Aug			Sep		
Marigold, French	Durango Orange	yellow-orange	9	12	1¼	3	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *							
Marigold, French	Durango Yellow	yellow	7	9	1	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, French	Janie Deep Orange	orange	6	10	1½	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, French	Janie Primrose	yellow	4	8	1	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, French	Safari Primrose	yellow	6	12	1½	2¾	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
14 Marigold, French	Safari Red	red with orange and yellow markings	10	12	1½	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, French Triploid	Nugget Supreme Yellow	yellow	8	16	1¼	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, French Triploid	Zenith Red	gold with red markings, red with gold markings	11	19	1¼	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, Signet	Lemon Star	yellow with mahogany markings	10	19	½	1½				* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
Marigold, Signet	Lulu	yellow	16	20	¾	1	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Mignonette	White Mignonette	white	23	40	5x1	14x1				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Monarda	Lambada	rose	-	36	-	¾						* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Apricot Trifle	peach	13	20	2	2½				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Cherry Rose	light red	14	22	2	2½				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Cherry Rose Jewel	light rose	17	19	1½	2				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Creamsicle	apricot and orange with crimson throat	12	17	2	2½				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Jewel Mix	orange, yellow, gold, red	16	25	2	2½				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Moonlight	creamy yellow	15	20	1½	2				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nasturtium	Mulberry Fool	dark orange red	17	20	2	2½				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
Nicotiana (alata)	Hummingbird Cherry Blossom	pink/rose	-	18	-	1½				* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	

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Plant ratings ²				Growth habit	Recommended for			Comments
Flower quantity	Flower quality	Foliage	Overall		Fragrance	Cutting	Drying	
4	4	4	4	Compact, mounding	y	-	y	Brilliant flower color, a few tall plants in otherwise compact bed, needs late season deadheading
3	3	3	3	Compact, mounding	sl	-	y	Needs deadheading, variable flower height but not unpleasant
3	3	3	3	Compact, mounding	sl	-	y	Needs deadheading, nice flower cover
4	3	3	3	Compact, mounding	y	-	y	Variable plant height, needs deadheading
4	3	3	3	Compact, mounding	y	-	y	Very nice color
3	3	3	3	Compact, mounding	y	-	y	Needs deadheading, very nice mix of colors
3	2	3	3	Compact, mounding	y	-	y	Needs some deadheading, variable flower height
3	3	3	3	Upright mounding	sl	y	y	Excellent mix of colors, uniform height
4	4	4	4	Upright, mounding	sl	y	y	Very nice signet type with striking markings
4	4	4	4	Compact, mounding	y	y	-	Outstanding, reliable signet type covered with mounds of tiny bright yellow flowers, fills in nicely
4	4	4	4	Upright, ascending	y	y	-	Excellent tall background plant or accent, big, bushy, attracts bees
2	3	3	3	Upright, ascending	n	y	-	Late to bloom, foliage dominates for first half of summer but very showy in mid-August until frost
3	3	3	3	Spreading mound	n	y	-	Interesting flower color, leaves with slightly wavy edges, lots of flowers visible through foliage, double and semidouble flowers
3	2	2	2	Spreading mound	n	y	-	Small semidouble flowers, not as showy as some of the orange varieties, moderate display above foliage
2	2	3	2	Spreading mound	n	y	-	Flowers hidden by foliage, not as showy as others, some flowers blotchy and unattractive
3	3	2	3	Mounding, spreading	n	y	-	Nice flowers above pale green sometimes yellowish foliage, apricot flowers very attractive
2	3	3	3	Spreading mounds	n	y	-	Foliage overwhelms flowers late in season, great mix of colors but hard to see
3	3	2	3	Spreading mound	n	y	-	Very nice flower color, light green foliage, not very attractive, good flower display above foliage
3	3	3	3	Spreading mound	n	y	-	Flowers have rich velvety texture, very colorful, good show above foliage
4	2	2	2	Upright, ascending	-	y	-	Petals dark rose on outside, lighter pink on inside with dark veins, needs deadheading, declines earlier than most

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																	
			min	max	min	max	Jun	Jul	Aug	Sep														
Nicotiana (<i>alata</i>)	Hummingbird Pink	rose pink	20	22	-	1½		✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿		
Nicotiana (<i>alata</i>)	Hummingbird White	white	-	21	1	1½		*	✿	✿	✿	✿	✿	✿	✿									
Nicotiana (<i>alata</i>)	Lumina	white	36	38	-	2		*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Nicotiana (<i>syvestris</i>)	Only the Lonely	white	46	55	-	1					*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Ornamental Pepper	Medusa	white with creamy yellow fruit	-	6	-	-		*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Osteospermum	Passion Mix	pink, rose, white with burgundy or dark blue centers	12	15	1¾	2			*	*	*	*	*	*	*	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Crown Mix	yellow, rose, blue, white, cream, light orange, light yellow	12	15	1½	2½		*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Fama Clear Faced Mix	lavender, yellow, white, purple, blue, light orange	10	13	1½	2½		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Fama Mixed Colors	cream, yellow, purple, burnt orange, white with purple or dark red face	-	14	1½	2		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Impressions Mix	rose, cream, lavender, yellow, red, purple with burgundy face	16	20	1¼	2		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Masterpiece Mix	yellow, lavender, cream with dark purple face	16	18	1¼	1½		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Oliver Twist	purple and yellow with dark red face	14	16	1¼	1¾		*	*	✿	✿	✿	✿	✿	✿	✿	*	*	*	*	*	*	*	
Pansy	Purple Rain	purple with blue face	21	25	1¼	1½		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Rococco	yellow, rose, lavender, with dark purple face	14	18	1¼	1½		*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Ultima Silhouette Mixed	purple, lavender, rose, yellow, white	10	12	1½	2½		*	*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Pansy	Zorro	dark purple, some black	12	14	1½	2		*	*	*	*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	
Perilla	Purple Hedge	burgundy foliage	-	-	-	-																		
Petunia	Candy Mixed	rose, red, purple with white edges	16	18	2	2½		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	*	*	*
Petunia	Carpet Blue	purple	12	14	2	2½		*	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	✿	*	*	*

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

^y* indicates less than full bloom and ✿ indicates full bloom.

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall	quantity		quality	Fragrance	Cutting	
4	2				3				3
4	2	3	3		Upright, ascending	y	y	-	Finished by mid-August, abundant flowers, uniform height
3	3	3	3		Upright, ascending	y	y	-	Tall plant covered with trumpet-shaped blooms
3	3	2	3		Upright, ascending	y	-	-	Late to bloom, excellent trumpet-shaped flowers, some cuts in leaves, foliage pale green, splotchy
-	-	2	2		Compact, mounding	n	-	fruit	Tiny compact plants, needs close spacing, flowers nondescript, all peppers yellow, not multicolored, slight rot on tips, mild bell pepper flavor
2	3	4	2		Upright, ascending	n	-	-	Few blooms and lots of flower buds in late August, petals turn brown when overmature, All America Selections Bedding Plant Award 1999
4	4	4	4		Upright, ascending	y	y	-	Mix of mostly pastel colors, clear face
4	4	4	4		Upright, spreading	y	y	-	Large blooms, reliable, excellent mix of solid colors
4	4	4	4		Upright, spreading	y	y	-	Large flowers, some with dark faces, some clear
4	4	4	4		Upright, ascending	y	y	-	Excellent mix of mostly pastel colors
4	4	4	4		Upright, ascending	y	y	-	Very similar to Rococco, ruffled flowers
4	4	4	4		Upright, ascending	y	y	-	Very interesting flower color, reverse of most pansies, dark petals with yellow face, excellent fragrance
4	4	4	4		Upright, ascending	n	y	-	Small flowers, vigorous plant, fills spaces well
4	4	4	4		Upright, ascending	y	y	-	Old fashioned ruffled pansy, overall color mix is yellow and lavender
4	4	4	4		Upright, spreading	sl	y	-	Outstanding mix of pastel colors
3	2	3	3		Upright, spreading	y	y	-	Not black as advertised, variable mix of flower colors, some with faces, others clear, nice velvety colors
-	-	4	4		Upright, ascending	-	y	-	Striking foliage color, interesting accent plant, good dye plant
3	3	3	3		Upright, spreading	sl	-	-	Interesting white petal edges, holds up well in rain
3	3	3	3		Upright, spreading	y	-	-	Velvety texture to petals, rich appearance

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) ^w		Flower size(in) ^x		Flowering period ^y											
			min	max	min	max	Jun			Jul			Aug			Sep		
Petunia	Carpet Lilac	lavender	10	12	-	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Carpet Salmon	dark salmon with cream throat	14	16	1½	1¾	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Carpet White	white	-	14	-	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Double Madness Lavender	rose	8	18	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Double Madness Red	red	12	16	2½	3	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Double Madness Rose and White	rose and white	16	19	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Dreams Midnight Improved	bluish purple	9	12	2½	4	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Dreams Red	red	14	16	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Fantasy Ivory	cream	-	10	-	1½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Madness Lilac	lavender	16	19	2	2½		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Madness Plum	rose with burgundy throat, veins	12	19	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Madness Plum Crazy	pink with plum veins + pale blue with dark blue veins	-	17	1½	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Madness Royal	purple	16	18	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Madness Sheer	pink with rose veins	-	14	-	2½		* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Madness Total	lavender/purple, rose/dark red, burgundy, pink	12	14	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Prism Sunshine	yellow	16	18	-	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Rose Carpet Improved	rose pink	-	16	1½	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Shepherd's Delight	rose pink with cream centers	10	12	2	2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Summer Kiss	dark rose	27	32	1½	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
Petunia	Tidal Wave™ Cherry	cherry	21	36	-	2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *

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

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

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

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall			Fragrance	Cutting	Drying	
quantity	quality								
3	3	3	3		Upright, spreading	sl	-	-	Needs deadheading
4	3	3	3		Compact, spreading ground cover	sl	-	-	Covered with blooms, not a true salmon, has more red in it
3	3	3	3		Upright, spreading	sl	-	-	Small flower size, needs deadheading, declines in mid-August
3	3	3	3		Upright, sprawling	y	-	-	Some disease, flowers don't hold up well in rain
3	3	4	3		Upright, ascending	y	-	-	Very nice even in late season, plants look great, foliage excellent background for flowers, nice double true red
3	3	3	3		Upright, spreading	sl	-	-	Interesting variegated rose and white patterns, some single petals with doubles
4	4	3	3		Upright, spreading	sl	-	-	Excellent color and form, velvety flower texture, very attractive
3	3	3	3		Upright, ascending	sl	-	-	Finished by mid-August, needs deadheading
3	2	3	3		Upright, spreading	y	-	-	Smaller flower size than most petunias, nice carpet of abundant flowers that establish early, needs deadheading late in season
3	3	3	3		Upright, ascending	y	-	-	Nice color, flowers look terrible after a rain, petals are pock-marked and droopy, needs deadheading
4	3	3	3		Upright, ascending	sl	-	-	Nice display even late in the season, needs deadheading for best show
3	2	3	3		Upright, ascending	y	-	-	Mix of two colors, small flowers, needs deadheading late in season, past its prime in mid-August
3	3	3	3		Upright, spreading	sl	-	-	Nice uniform color, holds up well all season
2	2	2	2		Upright, ascending	y	-	-	Some disease, needs deadheading, flowers decline in mid-August
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
3	2	2	3		Upright, ascending	sl	-	-	Some disease, declines in mid-August, excellent color, All America Selections Winner 1998, FleuroSelect Award Winner 1998
3	3	3	3		Upright, ascending	sl	-	-	Small flowers, needs deadheading, doesn't hold up well in rain
3	3	3	3		Upright, ascending	sl	-	-	Some off-type plants in mix, interesting flower color, blooms decline in mid-August
4	3	3	3		Upright, spreading	n	-	-	Aggressive spreader, needs lots of space, nice small flowers with good uniform color, holds up well in rain and cold weather
4	3	4	3		Upright, spreading	y	-	-	Mountains of flowers, needs bed by itself, small flowers, very fragrant

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y															
			min	max	min	max	Jun				Jul				Aug				Sep			
Petunia	Tidal Wave™ Hot Pink	rose pink	13	24	1¼	1¾	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *			
Phlox	21st Century	white, lavender, coral, pink	3	12	½	¾					* * * * *	* * * * *	* * * * *	* * * * *								
Phlox	Starry Eyes Mix	pink, red rose, white, cream, lavender	13	21	1	1¼					* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *		
Phlox, Night	Zaluzianskya	white inside, maroon outside	10	12	-	½					* * * * *	* * * * *										
Poached Eggs (<i>Limnanthes douglasii</i>)		yellow with white edges	-	7	1	1¾								* * * * *	* * * * *	* * * * *	* * * * *					
Polygonum	Pink Punching Balls	pink	8	12	-	1½x1½								* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *		
Poppy	Flora	light red	15	28	1½	2½								* * * * *	* * * * *				* * *	* *		
Rudbeckia	Indian Summer	gold with brown centers	24	35	3½	7													* * * * *	* * * * *		
Rudbeckia	Rustic Colors	yellow, gold, burnt orange	22	33	2½	5													* * * * *	* * * * *		
Rudbeckia	Sputnik	yellow tips, mahogany base with brown centers	16	33	2½	4½													* * * * *	* * * * *		
Rudbeckia	Toto	gold with brown centers	10	16	2	3													* * * * *	* * * * *		
Salpiglossis	Bolero Hybrids Mix	yellow, rose with yellow markings	10	23	-	2													* * * * *	* * * * *		
Salvia (<i>coccinea</i>)	Coral Nymph	coral pink	22	33	1¼	1½													* * * * *	* * * * *		
Salvia (<i>coccinea</i>)	Snow Nymph	white	20	25	2	2½													* * * * *	* * * * *		
Salvia (<i>farinacea</i>)	Rhea	blue	14	18	2x1½	7x1½													* * * * *	* * * * *		
Salvia (<i>splendens</i>)	Empire Salmon	salmon	10	12	3x2½	7x2½	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *									
Salvia (<i>splendens</i>)	Orange Zest	scarlet	12	15	6x3	8x3													* * * * *	* * * * *		
Salvia (<i>splendens</i>)	Purple Vista	purple	10	12	6x3	8x3	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	

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^xif 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.

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Plant ratings ^a					Growth habit	Recommended for			Comments
Flower quantity	Flower quality	Foliage	Overall	Fragrance		Cutting	Drying		
4	3	3	3	Upright, spreading	y	-	-	Mountains of flowers, needs a bed by itself, spreads upward and outward, outstanding late season blooms, holds up well in rain and cold weather	
1	2	1	1	Upright, ascending	n	-	-	Damaged by herbicide Preen®, poor showing this year	
4	4	4	4	Upright, ascending	y	y	-	Rounded flower clusters with interesting markings on the petals, look like stars	
1	1	1	1	Upright, ascending	sl	-	-	Interesting colors, buds are maroon, flowers open white, flowers bloom successively from bottom of stem to the top, not many open at one time, not very ornamental	
1	1	1	1	Open, sprawling	n	-	-	Some disease, weak stems, floppy plant with sparse flowers, nice color but not very ornamental	
4	4	4	4	Compact, spreading ground cover	n	-	-	Very interesting ground cover, spreads fast, dark foliage topped with light pink balls of flowers, also recommended for containers, foliage is green striped with red	
2	3	2	2	Upright, ascending	n	y	pods	Excellent early season show but declines in midseason, best mixed with other flowers, interesting double flowers, plants look terrible when pods form, leaves dry up and turn brown	
4	4	4	4	Upright, ascending	n	y	y	Late to bloom but worth the wait, excellent form, variable flower size, nice dark green foliage, All America Selections Winner 1995	
4	4	4	4	Upright, ascending	n	y	y	Attracts bees, interesting mix of flower colors, very attractive	
4	4	4	4	Upright, ascending	n	y	y	Excellent blooms for late season color, attracts bees	
3	3	3	3	Upright, ascending	n	y	y	Attractive compact size, neat plant	
2	2	2	2	Upright, ascending	n	y	-	Good in midseason, but declines by mid-August, looks ragged late in season, interesting flower colors	
2	3	3	2	Upright, ascending	n	y	-	Excellent color, nice in containers if cut back to encourage summer-long blooms, sparse flowers, effect is more green than color until late season	
2	3	3	2	Upright, ascending	sl	y	-	Blooms sparse, not as ornamental as other salvias	
3	3	3	3	Upright, ascending	sl	y	y	Outstanding color, compact blooming spikes, great accent plant	
2	2	3	2	Upright, ascending	n	-	-	Needs deadheading, not as good as 'Salsa Salmon', flowers are sparse and droopy	
3	3	3	3	Upright, ascending	n	-	-	Old flowers fade to a pale red, some late-season deadheading needed	
3	3	3	3	Upright, ascending	n	-	-	Interesting color, needs closer spacing, needs a little deadheading late in season	

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Name	Cultivar	Flower color	Height (in) ^w		Flower size (in) ^x		Flowering period ^y																		
			min	max	min	max	Jun	Jul	Aug	Sep															
Salvia (<i>splendens</i>)	Red Hot Sally	scarlet red	9	13	6x3	8x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Salvia (<i>splendens</i>)	Red Vista	scarlet red	10	15	6x3	9x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Salvia (<i>splendens</i>)	Salsa Salmon	salmon	10	12	4x3	6x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Salvia (<i>splendens</i>)	Salsa White	cream	10	12	3x2	5x2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Salvia (<i>splendens</i>)	Splendissima	scarlet	18	22	9x3	12x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22 Salvia (<i>viridis</i>)	Bicolor Mix	purple, pink	16	26	4x2	9x2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Salvia (<i>viridis</i>)	Claryssa Pink	pink	20	22	4x1½	9x1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sanvitalia	Mandarin Orange	orange with brown centers	8	15	1	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Scabiosa	Finest Mixed	white, pink, lavender, rose, burgundy	17	31	1½	2½					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Scabiosa	White Perfection	white	24	28	-	-																	*	*	*
Schizanthus	Royal Pierrot	pink, lavender	12	14	½	¾			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Shoo-Fly Plant (<i>Nicandra physalodes</i>)		blue	36	46	1¼	2½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Silene	Hot Pink	pink	5	11	-	½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Silene	Pink Pirouette	hot pink	6	10	-	¾	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Black Prince	dark red	13	19	4x2½	11x2½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Brazilian Carnival	yellow, rose, white, pink bicolors	15	22	6x3½	11x3½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Floral Showers	bicolor yellow and rose	-	8	-	3x2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Apricot Bicolor						*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Hobbit Dwarf Mix	rose, pink, apricot, white	7	14	3	3½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Liberty Cherry	cherry red	14	21	5x3	12x3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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^y* indicates less than full bloom and ⬤ indicates full bloom.

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall	Fragnance		Cutting	Drying		
quantity	quality								
4	3	3	3	Upright, ascending	n	-	-	Excellent color and performance, nice tall flower stalks, foliage exceeds flower height on some plants	
3	3	3	3	Upright, ascending	n	-	-	Excellent color and large bloom spikes	
3	3	3	3	Upright, ascending	n	-	-	Very nice flower color, holds up well in rain	
2	2	3	2	Upright, ascending	n	-	-	Ragged appearance after rain, needs deadheading to remove brown old flowers, not as vigorous as other salvias, some disease	
4	4	4	4	Upright, ascending	n	y	-	Tall spikes, good color all season, the best salvia this season	
2	3	3	3	Upright, ascending	n	y	y	Nice bushy plants with interesting bracts, uneven color display depending on where the pink and blue plants were spaced	
3	3	3	3	Upright, ascending	n	y	y	Very colorful bracts, flowers are secondary, lots of crowded upright stems	
4	4	4	4	Compact, spreading ground cover	n	y	-	Reliable edging plant, long season blooms, no maintenance, All America Selections Winner	
3	3	3	3	Open, sprawling	y	y	-	Burgundy flowers especially attractive, nice mix of colors, floppy habit, needs staking or other tall flowers nearby	
1	2	3	1	Upright, spreading	-	-	-	Finally bloomed in mid-September	
2	1	1	1	Compact, mounding	n	n	-	Lots of disease, looks poor in early August, blooms fade fast, needs close spacing to fill in area	
4	4	4	-		n	y	Pods	Large plant with morning-glory-like blue flowers, will self sow in the garden, needs lots of space	
3	2	2	2	Upright, ascending	n	n	n	Some plants totally without blooms, not showy until late August	
1	1	1	1	Compact, mounding	n	n	n	Disappointing, mounded plants covered with hot pink blooms very early but quickly taken over by balloon-like seed pods, one plant bloomed through summer but remainder died	
3	3	3	3	Upright, ascending	n	y	-	Flowers look like velvet, very rich	
2	3	2	2	Upright, ascending	n	y	-	Interesting bicolor flowers, not as prolific as some snaps	
3	3	3	3	Compact, mounding	n	n	-	Needs deadheading to maintain full-season color, interesting bicolor flowers	
3	3	3	3	Compact, mounding	n	n	-	Needs deadheading, nice open bell-shaped butterfly-type flowers	
3	3	3	3	Upright, ascending	n	y	-	Long stems for cutting, good uniform color	

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																
			min	max	min	max	Jun			Jul			Aug			Sep							
Snapdragon	Pink Bells	pink	6	8	1x2½	3x2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Plum Blossom	pink rose bicolor	25	36	6x2½	10x2½					*	*	*	*	*	*	*	*	*				
Snapdragon	Powys Pride	orange-red	-	14	3x2½	6x2½					*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Sonnet Mixture	yellow, orange, rose, pink	14	27	6x3	9x3					*	*	*	*	*	*	*	*	*	*	*	*	*
Snapdragon	Tahiti Mauve	pink/mauve	6	10	3x3	6x3	*	*	*	*	*	*	*	*	*								
Snapdragon	Trumpet Serenade Mixed	yellow, pink, rose, red, light orange	-	16	4x3	6x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Statice	Sirima	pink, rose, lavender, purple mix	18	31	-	¼					*	*	*	*	*	*	*	*	*	*	*	*	*
Statice	Suworowii	pink	12	23	12x½	15x½					*	*	*	*	*	*	*	*	*	*	*	*	*
Stock	Cinderella Antique Pink	lavender	10	18	6x2½	11x2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Stock	Cinderella Dark Blue	purplish rose	8	14	6x2	8x2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Stock	Floral Fanfare	lavender, pink, white	21	27	8x3	12x3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Stock	Legacy Mix	pink, white, lavender	12	24	4x2	8x2					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Crimson Thriller	gold and burnt orange with dark brown centers	36	58	3	5					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Del Sol	yellow with brown centers	36	42	3	8					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Floristan	yellow tips, red bases with brown centers	24	54	4½	5.0					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Giant Sungold	gold	52	63	3	12					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Kong	yellow with brownish yellow centers	70	80	10	12								*	*	*	*	*	*	*	*	*	*
Sunflower	Lemon Queen	light yellow with brown center	22	40	8	11					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Pacino	yellow	24	28	3	5½					*	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Park's Velvet Tapestry	yellow, mahogany, dark red with brown centers	56	97	4	6					*	*	*	*	*	*	*	*	*	*	*	*	*

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

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

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

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall			Fragrance	Cutting	Drying	
quantity	quality								
3	3	3	3		Compact, mounding	n	n	-	Needs deadheading to maintain full-season color, one of the best dwarf snaps
4	4	4	4		Upright, ascending	n	y	-	Outstanding bicolor flowers with two shade of pink, very dramatic effect
3	3	1	2		Upright, ascending	n	y	-	Uneven display, variegated foliage looks diseased, not as good for cutting as other snaps
3	2	3	3		Upright, ascending	n	y	-	Variable height, some flower stalks stubby, others tall
3	3	3	3		Compact, mounding	n	n	-	Needs deadheading to maintain full-season color, bicolor carpet, occasional plant to 14 inches
3	3	3	3		Upright, ascending	n	y	-	Open butterfly-type flowers, short limited use as cut flower, nice color mix
4	4	4	4		Upright, ascending	n	y	y	Excellent mix of pastel colors, nice upright stems for cutting
2	2	2	2		Open, sprawling	sl	y	y	Floppy flower stalks drape over all neighbors, later season blooms are more upright, interesting blooms but might be best staked or in containers
2	1	2	1		Upright, ascending	y	y	-	Blooms early then has unattractive seed pods for most of August, many plants with deformed flowers
2	2	2	2		Open, sprawling	sl	y	-	Poor flower quality and quantity, unattractive seed pods form early
1	1	1	1		Upright, ascending	y	y	-	Poor growth, leaves are curled downward and look limp, flowers decline early, lots of plant death
4	4	4	4		Upright, ascending	y	y	-	Outstanding flower display all summer, white flowers mature a bit before pinks and lavenders, excellent contrast between silvery foliage and flowers
2	2	2	2		Upright, ascending	n	y	-	Nice mix of flower colors from deep burnt orange to gold, variable plant size, one giant plant and others very short, looks ragged
3	2	2	2		Upright, spreading	n	y	-	Very floppy stems, needs staking
3	3	3	3		Upright, ascending	n	y	y	Attracts bees, nice interesting color, done by mid-August
3	3	3	3		Upright, ascending	n	y	-	All ray flowers, fully double heads
2	2	2	2		Upright, ascending	n	n	-	Huge stems, late to bloom, multiple heads per stem, some need staking, too big for cutting, disk bigger than ray petals
3	3	3	3		Upright, ascending	n	y	-	Variable flower height, nice flowers, disk as big as ray petals
3	3	3	3		Upright, ascending	n	y	y	Short sunflower with nice small heads, attracts bees, recommended for containers
3	3	3	3		Upright, ascending	n	y	y	Attracts bees, nice mix of flower colors, good size for floral designs

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y											
			min	max	min	max	Jun	Jul	Aug	Sep								
Sunflower	Santa Fe	yellow	52	62	8	10					*	*	*	*	*	*	*	*
Sunflower	Soraya	gold with brown centers	40	64	6	8					*	*	*	*	*	*	*	*
Sunflower	Sun Goddess	yellow with brown centers	56	64	6	8					*	*	*	*	*	*	*	*
Sunflower	Sunbeam	yellow with yellow center	30	55	5	9					*	*	*	*	*	*	*	*
Sunflower	Sunbright	yellow with brown center	54	61	8	10					*	*	*	*	*	*	*	*
Sunflower	Sundance Kid	yellow, gold	17	20	3	5	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Tiger's Eye Mix	gold with reddish brown markings, mahogany	40	75	6	9	*	*	*	*	*	*	*	*	*	*	*	*
Sunflower	Titanic	gold	58	68	6	8					*	*	*	*	*	*	*	*
Sunflower	Valentine	lemon yellow with dark brown centers	46	65	3½	6½					*	*	*	*	*	*	*	*
Sunflower	Van Gogh Mix	yellow, gold, red, brown mix with brown centers	40	65	2½	7½					*	*	*	*	*	*	*	*
Sunflower	Vanilla Ice	light yellow with dark brown centers	40	50	1½	3					*	*	*	*	*	*	*	*
Sunflower, Mexican		orange with light orange centers	33	60	2	4½					*	*	*	*	*	*	*	*
Sweet William	Red Monarch	red	9	27	½	¾					*	*	*	*	*	*	*	*
Tithonia	Fiesta Del Sol	orange	10	12	1	1½					*	*	*	*	*	*	*	*
Venidium	Jaffa Ice	orange or white with brown centers	21	38	2½	3					*	*	*	*	*	*	*	*
Venidium	Orange Prince	orange	8	32	2	3					*	*	*	*	*	*	*	*
Venidium	Zulu Prince	white, orange with brown centers	18	32	2½	3					*	*	*	*	*	*	*	*
Verbascum	Southern Charm	pink/burgundy centers	18	24	-	1					*	*	*	*	*	*	*	*
Verbena	Moon River	lavender	15	22	-	¼					*	*	*	*	*	*	*	*
Verbena	Quartz Formula Mix	red, white, rose, purple, pink	9	15	-	¼					*	*	*	*	*	*	*	*

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^xif 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.

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Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall			Fragrance	Cutting	Drying	
quantity	quality								
3	3	3	3		Upright, ascending	n	y	-	Nice double blooms, solid heads of ray flowers, attracts a lot of attention
3	3	3	3		Upright, ascending	n	y	-	Medium sized flowers, heads face upright, All America Selections Award Winner 2000
3	3	3	3		Upright, ascending	n	y	-	Attractive midsized flowers
3	3	3	3		Upright, ascending	n	y	-	Disk bigger than ray flowers, centers greenish yellow
3	4	3	3		Upright, ascending	n	y	-	Large brown disks surrounded by short ray flowers, attractive, disk bigger than rays
3	3	3	3		Upright, ascending	n	n	y	Very short stems, flowers done early, need other color later in season to fill in, produces mature seed
3	3	3	3		Upright, ascending	n	y	-	Weak stems need staking, interesting color mix of flowers, some all ray flowers, others with brown stripe patterns on ray flowers
3	3	3	3		Upright, ascending	n	y	-	Nice upward-facing heads with all ray flowers, big puffs of gold
4	4	4	4		Upright, ascending	n	y	y	Excellent flowers, abundant, uniform height, good size for cutting, Fleuroselect Winner
3	3	3	3		Upright, ascending	n	y	y	May need staking, attracts bees, nice mix of colors, double and single flowers
3	3	3	3		Upright, ascending	n	y	-	Very nice yellow color, flowers small but abundant, rays larger than disk
3	3	3	3		Upright, ascending	sl	y	-	Interesting large plant, great eye-popping color, small but abundant flowers, interesting trumpet-shaped velvety flower base
4	3	3	3		Upright, ascending	y	y	-	Excellent deep red color, blooms in midseason but worth the wait, spectacular late season show
2	2	2	2		Upright, ascending	n	n	-	Nothing to rave about, flowering spotty and uneven, not many blooms late in season, All America Selections Winner 2000
3	3	3	3		Open, sprawling	n	y	-	Lanky growth, needs lots of room, exotic looking flowers
2	3	2	2		Upright, sprawling	sl	y	-	Lanky growth, fuzzy stems and buds, needs lots of room
2	2	2	2		Open, sprawling	n	y	-	Lanky growth, needs lots of room
2	3	2	2		Upright, spreading	n	y	-	Late to bloom, very interesting flower color, sparse blooms of variable size
3	3	3	3		Open, sprawling	y	y	-	Best use as filler or in containers, too open to be nice alone
3	3	3	3		Compact, spreading ground cover	n	-	-	One of the nicer verbenas, good flower color mix, blooms evenly

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																
			min	max	min	max	Jun	Jul	Aug	Sep													
Verbena	Quartz Polka Dot Mix	red, pink, purple some with white centers	10	12	-	½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Verbena	Romance Pastel Mix	rose, apricot, white, pink	6	9	-	½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Verbena	Tickled Pink	pink edges with cream centers	6	10	-	½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Verbena, Moss	Sterling Star	lavender	13	30	-	¼			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Vinca	Stardust Orchid	dark pink	-	5	-	1			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Four Seasons Golden Yellow	yellow	10	19	1	1¼	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Sorbet Blackberry Cream	purple, lavender, and cream petals with yellow centers	18	20	1	1½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Sorbet Blues Mix	purple, lavender, white	15	18	1	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Sorbet Formula Mix	lavender, yellow, purple, blue	14	16	-	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Sorbet French Vanilla	white	12	14	1	1¼	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Sorbet Lemon Chiffon	cream and yellow	14	16	-	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Viola	Sorbet Yesterday Today & Tomorrow	lavender-blue, cream	14	18	¾	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Benary's Giant Formula Mix	scarlet, yellow, purplish-pink, red	11	26	2½	6			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Blue Point Eldorado	salmon	18	24	2½	4½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Blue Point Formula Exquisite	dark coral	13	30	2½	3½			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Blue Point Formula Mix	cream, scarlet, orange, yellow, pink, purplish-pink	16	33	2½	4			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Desert Sun	yellow, creamy yellow, cream	13	30	1	1¾			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Oklahoma Mix	pink, scarlet, yellow, gold, rose	16	28	1½	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>elegans</i>)	Oklahoma Scarlet	scarlet, orange	9	20	1	2½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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

Plant ratings ²					Growth habit	Recommended for			Comments
Flower		Foliage	Overall			Fragrance	Cutting	Drying	
quantity	quality								
1	2	3	2		Upright, ascending	n	-	-	Blooms late, unevenly, only some colors in bloom, lots of flower buds but too late, colors do not bloom at same time, only red and pink blooming in mid-August
2	3	3	2		Compact, spreading	n	-	-	Nice mix of colors, uneven flowering on plants makes them look lopsided, late to full bloom
3	4	4	4		Upright, spreading	sl	-	-	Interesting two-tone color, very pretty in full bloom
2	2	3	2		Open, sprawling	y	y	-	Tiny flowers on long sprawling stems, okay as filler, but not alone
1	1	1	1		Upright, ascending	n	n	n	Plants don't grow much, not well adapted to cold soils, flowers sparse, plant short, not recommended for gardens, may be better in containers, All America Selections Winner 1999
4	4	4	4		Upright, ascending	n	y	y	Mounds of bright yellow flowers all season
4	4	4	4		Upright, ascending	n	y	y	Great mounds of tiny flowers, fills spaces very well
4	4	4	4		Upright, ascending	sl	y	y	Beautiful combination of colors, plenty of blooms all season
3	3	3	3		Upright, spreading	sl	y	y	Beautiful mix of pastel colors, abundant blooms
4	4	4	4		Upright, ascending	n	y	y	Very nice white color, excellent mounds crowded with flowers all season
4	3	4	4		Upright, ascending	n	y	y	Some lavender plants in with yellow, beautiful creamy yellow flowers
4	4	4	4		Upright, spreading	n	y	y	Thousands of blooms, holds up well all summer
3	4	3	3		Upright, ascending	n	y	y	Excellent strong stems, large flowers, eye-popping colors
3	3	3	3		Upright, ascending	n	y	y	Excellent color, variable flower size, fairly uniform height
3	3	4	3		Upright, ascending	n	y	y	Seems later than others to bloom, nice flower size, flower color fades to light pink with age
4	4	4	4		Upright, ascending	n	y	y	Outstanding color and stem length, very bright colors, variable flower height
2	2	3	2		Upright, ascending	n	y	y	Floppy stems, other zinnias better, warm color mix
3	2	2	2		Upright, ascending	n	y	y	Compact flowers in tight heads variable height and flower size, some discolored foliage
2	2	3	2		Upright, ascending	n	y	y	Some orange mixed with scarlet, variable flower height, shorter than expected

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Name	Cultivar	Flower color	Height (in) ^w		Flower size(in) ^x		Flowering period ^y																					
			min	max	min	max	Jun			Jul			Aug			Sep												
Zinnia (<i>haageana</i>)	Profusion Cherry	cherry red	16	18	1½	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>haageana</i>)	Profusion Orange	orange and yellow-orange	12	18	1¼	3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>haageana</i>)	Small World Pink	pink	10	20	1¼	2¼	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>haageana</i>)	Star Gold	gold	8	11	1	2					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>haageana</i>)	Crystal White	white with yellow centers	7	12	1	1½					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>haageana</i>)	Star Orange	orange	6	12	1	1¾					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>haageana</i>)	Persian Carpet	orange, yellow cream with dark red centers	9	25	1	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>peruviana</i>)	Bonita Red	orange-red	23	33	1	1½					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Zinnia (<i>peruviana</i>)	Bonita Yellow	dusky yellow, yellow-orange	15	27	¾	1½	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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The annual flowers evaluated during 1999 were purchased or donated from the sources listed below. Those appearing in bold type either donated seeds or plants or provided substantial discounts for their products. We sincerely appreciate their generosity. Their donations allow us to evaluate the greatest variety of high quality cultivars.

All America Selections	1311 Butterfield Road, Suite 310	Downers Grove	IL	60515
Aspen Acres Farm & Greenhouses	P.O. Box 16004	Two Rivers	AK	99716
Ball Seed Company	P.O. Box 335	West Chicago	IL	60185
W. Atlee Burpee & Co.	300 Park Ave.	Warminster	PA	18991
Carolina Seeds	P.O. Box 2658 Hwy 105 Bypass	Boone	NC	28607
Cooks Garden	P.O. Box 535	Londonderry	VT	05148
Connell's Dahlias	10616 Waller Road East	Tacoma	WA	98446
Denali Seed	P.O. Box 111425	Anchorage	AK	99511
Germania Seed Co.	5978 North Northwest Hwy	Chicago	IL	60631
Harris Seeds	1155 Harkins Rd.	Salinas	CA	93901
Johnny's Selected Seeds	Foss Hill Road	Albion	ME	04910
Nichol's Garden Nursery	1190 North Pacific Hwy	Albany	OR	97321
PanAmerican Seed Co.	P.O. Box 438	West Chicago	IL	60186

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Plant ratings*					Growth habit	Recommended for			Comments
Flower		Foliage	Overall	quantity		quality	Fragrance	Cutting	
4	4				4				4
4	4	4	4	4	Upright, ascending	n	y	y	Outstanding brilliant flowers, no maintenance, All America Selections Gold Medal Flower Award 1999
3	3	3	3	3	Upright, spreading	n	y	y	Small pink flowers bloom all summer
3	4	3	3	3	Upright, ascending	n	y	y	Excellent cover of gold flowers, no maintenance
4	4	4	4	4	Compact, mounding	n	y	y	Excellent mounds of white flowers, no maintenance, All America Selections Winner 1999
4	4	4	4	4	Compact, mounding	n	y	y	Bright orange flowers, petite, no maintenance required
4	4	4	4	4	Upright, ascending	n	y	y	Outstanding multi-colored petite flowers, small flower size, very interesting layered flower colors, dark colored top petals give layered star appearance
2	2	3	2	2	Upright, ascending	n	y	y	Sparse flowers, late to bloom, variable flower height
4	4	4	4	4	Upright, ascending	n	y	y	Interesting, bushy zinnia with hundreds of small, dusky yellow flowers, good filler plant, much better than 'Bonita Red'

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Geo Park Seed Co.	Cokesbury Road	Greenwood	SC	29647	
Pinetree Garden Seeds	P.O. Box 300	New Gloucester	ME	04260	
Risse Greenhouses	981 Risse Road	Fairbanks	AK	99712	
Seeds of Change	621 Old Santa Fe Trail #10	Santa Fe	NM	87501	
Seeds of Distinction	P.O. Box 86 Station A	Toronto	Ontario	M9C 4I2	Canada
Shepherds Garden Seeds	30 Irene St.	Torrington	CT	06790	
Stokes Seeds Inc.	P.O. Box 548	Buffalo	NY	14240	
Territorial Seed Co.	P.O. Box 157	Cottage Grove	OR	97424	
Thompson & Morgan, Inc.	P.O. Box 1308	Jackson	NJ	08527	
Otis S. Twilley Seeds	121 Gary Road	Hodges	SC	29653	
Unwins Seeds Ltd.		Histon	Cambridge	CB4 4LE	Great Britain
Vaughan's Seed Co.	5300 Katrine Ave.	Downers Grove	IL	60515	

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

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