2002 Annual Report

**Horticulture Section** 

Dickinson Research Extension Center 1089 State Avenue Dickinson, ND 58601



Nicotiana 'Avalon Bright Pink' courtesy of All-America Selections

# 2001 CULTIVAR TRIALS OF BEDDING PLANTS

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## Summary

### Introduction

The Plant Sciences Department conducted performance trials on over 400 annual bedding plants during the 2001 growing season at three locations across North Dakota. In Fargo, the main trials are located in the plots on the west side of campus off 18<sup>th</sup> street north. The garden in Dickinson is located at the Dickinson Research Extension Center on State Avenue while the Williston plots are at the Williston Research Extension Center on State Avenue while the Williston plots are at the Williston Research Extension Center on the west side of Williston. The Williston and Dickinson sites have similar sandy, light soil while the Fargo plots consist of a heavy, clay soil. The weather in the western part of the state also tends to be drier and warmer than in the eastern part of the state. Some cultivars grow equally good (or bad) at all three locations while others show definite differences in performance between the three sites.

# Culture

Cultivars were seeded in the horticulture and forestry greenhouses on the NDSU campus January through April. When at the proper stage, seedlings were transplanted in cells packs containing a peat-based growing media. Six to twelve plants of each cultivar were transplanted into the field at the Fargo plots on May 30 - June 5; in Dickinson on May 23, and in Williston on May 24, 2001. All plants were immediately watered in with Sterns Miracle-Gro® (15-30-15)<sup>(1)</sup> water soluble fertilizer.

Overhead irrigation was applied as needed in Fargo and Dickinson while Williston had drip irrigation in place.

Weeding was done by hand at all three stations but Round-up and Surflan AS were put down in Fargo for long term weed control.

## **Site Information**

## Fargo

As stated earlier, the main trial garden is located in Fargo on the west edge of the NDSU campus off of 18<sup>th</sup> street north. The soil is heavy clay and irrigation is applied with overhead sprinklers when needed. The beds are in full sunlight so shade has been provided with shade cloth draped over conduit forms. A new shade/lathe house is in the plans for 2002 to provide a structure with easier access and better viewing. Table 1 shows weather data from Fargo in 2001.

 Table 1. 2001 May - August Average Temperature and Precipitation for Fargo, ND.

	Τε	mperature (F)	Pre	cipitation (inches)
	Average 2001	Average 1971 - 2000	Totals 2001	Average 1971 - 2001
May	58.5	57.4	2.61	2.61
June	66	66.0	2.31	3.51
July	73	70.6	3.36	2.88
August	71.5	69.0	2.26	2.52

#### Dickinson

The Dickinson trial garden is located on the site of the Research Extension Center off of State street. The soil here is a lighter, sandier soil than Fargo. In 2001, raised beds were added that had a nice, composted soil in them. These raised beds were located in both full sun and shade. Begonias and impatiens reacted well to the raised beds located in the shade. Table 2 shows weather data for Dickinson in 2001.

Table 2. 2001 May - August Average Temperature and Precipitation for Dickinson, ND.

	Те	mperature (F)	Pre	cipitation (inches)
	Average 2001	Average 1971 - 2000	Totals 2001	Average 1971 - 2001
May	56	53.4	1.59	2.24
June	62	62.4	6.29	3.57
July	71	68.1	3.60	2.20
August	72	67.3	0.02	1.65

#### Williston

The newest addition to our trial program is the site at Williston, ND. The garden itself is located on the grounds of the Research Extension Center west of Williston on Highway 2. The soil here is also lighter and sandier than Fargo and drip irrigation was used to provide supplemental water. Table 3 shows weather data for Williston for 2001.

Table 3. 2001 May - August Average Temperature and Precipitation for Williston, ND.

	Те	mperature (F)	Prec	cipitation (inches)
	Average 2001	Average 1971 - 2000	Totals 2001	Average 1971 - 2001
May	57.5	57.1	0.52	2.09
June	62.5	65.7	4.17	2.72
July	70.5	71.1	2.98	2.45
August	72	70.2	0.05	1.63

# **Evaluations**

Plants were evaluated twice over the growing season for height, spread, vigor, uniformity, and overall appearance. In Fargo, the first evaluation took place on July 18 and 19 while the second one was August 30 through September 11, 2001. The Dickinson evaluations took place July 11 and August 24 and 25. In Williston plants were evaluated July 12 and August 24. The July evaluations in Dickinson and Williston took place during field days at the Research Extension Centers. Top performers from each site during each evaluation time are located on pages 5 through 9.

# **Field Days**

The fifth annual flower, ornamental grasses and turfgrass field day was held Saturday, August 4, 2001 at the Fargo plots. The Williston and Dickinson Research Extension Centers conducted tours of the horticulture research areas in conjunction with field days at each of the stations.

The trial garden at NDSU is an official All-America Selections display garden and is open to the public throughout the growing season. Also on display are over 300 miscellaneous perennials that are evaluated over the season for bloom, vigor, winter hardiness and general overall quality. There is also an official display garden of the American Hemerocallis Society. Currently, there are over 1100 varieties of daylilies in this garden.

# Acknowledgments

We would like to thank official supporters of the 2001 display gardens: Ernst Benary of America, Inc.; Grimes Seeds; All-America Selections; Ball Seed Co.; Pan American Seed; Bear Creek Gardens (Jackson and Perkins Wholesale); and Daehnfeldt, Inc. We hope the results from our trial gardens are beneficial in their research for new and improved cultivars.

Thanks also goes out to the following: Jeanne Brandvold, our student help in Fargo who's been a wonderful asset to our program for the

past five years; Jerry Larson, county extension agent for Billings and Stark counties in western ND; Kris Ringwall and the staff of the Dickinson Research Extension Center; and Lorna Bradbury and the staff of the Williston Research Extension Center. The trial gardens would not be a reality without the help of these talented and dedicated individuals.

<sup>(1)</sup> Disclaimer- Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by NDSU or the North Dakota Agriculture Experiment Station is implied.

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#### 2001 TOP PERFORMERS

Top performers are those that received either \*, \*\*, or \*\*\* during either evaluation time as seen on the 'Height and Spread Measurements Table' on pages 10-20.

Fargo		Dickinson		Williston	
July 18, 19	Aug. 30 - Sept. 11	July 11	August 25	July 12	August 24
Ageratum 'Blue Horizon'	Abutilon cultivars:	Begonia cultivars:	Asarina 'Joan Lorraine'	Begonia cultivars:	Asarina 'Mystic Pink'
Amaranthus 'Aurora'	'Bella Apricot'	'Lotto White'	Begonia cultivars:	'Ambassador Pink'	Begonia cultivars:
Amaranthus 'Illumination'	'Bella Coral Deep'	'Olympia Sprint Red'	'Lotto White'	'Olympia Sprint Red'	'Ambassador Pink'
Ammi 'Green Mist'	'Bella Red'	'Olympia Sprint Rose'	'Olympia Sprint Red'	'Olympia Sprint Rose'	'Olympia Sprint Red'
Antirrhinum 'Purple Ribbon'	'Bella Salmon'	'Olympia Sprint White'	'Olympia Sprint White'	'Olympia Sprint White'	'Olympia Sprint Rose'
Arctotis venusta	Agastache 'Heather Queen'	'Party Red-Bronze Leaf'	'Party Red-Bronze Leaf'	'Party Red-Bronze Leaf'	'Olympia Sprint White'
Asarina 'Joan Lorraine'	Ageratum 'Blue Lagoon'	'Super Olympia Pink'	'Super Olympia Red'	'Super Olympia Pink'	'Super Olympia Pink'
Begonia cultivars:	Ageratum 'Fields Blue'	'Super Olympia Red'	'Super Olympia Rose'	'Super Olympia Red'	'Super Olympia Red'
'All Round Mix'	Ageratum 'True Blue'	'Super Olympia Rose'	'Super Olympia White'	'Super Olympia Rose'	'Super Olympia Rose'
'Lotto White'	Antirrhinum 'Purple Ribbon'	'Vodka'	'Vodka'	'Super Olympia White'	'Super Olympia White'
'Party Red-Bronze Leaf'	Asarina 'Joan Lorraine'	Briza maxima (Quaking Grass)	Capsicum 'Chilly Chili'	'Vodka'	'Vodka'
'Super Olympia Pink' 'Super Olympia Red'	Asarina 'Mystic Pink' Begonia cultivars	Cosmos 'Cosmic Orange' Dianthus 'First Love'	Catharanthus(Vinca) cultivars: 'First Kiss Blush'	Gypsophila 'Gypsy' Impatiens hawkerii cvs:	Calibrachoa 'Trailing Orchid Pink Celosia 'Prestige Scarlet'
'Super Olympia Rose'	'All Round Mix'	Eustoma 'Forever Blue'	'First Kiss Coral'	'Harmony Raspberry Cream'	Dianthus 'Melody Pink'
'Super Olympia White'	'Ambassador Mix'	Gypsophila 'Garden Bride'	'First Kiss Polka Dot'	'Harmony White'	Impatiens hawkerii cvs:
'Vodka'	'Ambassador Pink'	Impatiens hawkerii cvs:	'First Kiss Ruby'	'Sonic Fuchsia'	'Harmony White'
Capsicum 'Chilly Chili'	'Inferno Mix'	'Harmony Raspberry Cream'	'Merlot Mix'	'Sonic Light Pink'	'Sonic Red'
Celosia 'Prestige Scarlet'	'Lotto Scarlet'	'Sonic Peach'	'Prestige Scarlet'	'Sonic Peach'	'Supersonic Lavender'
Celosia 'Purple Flamingo'	'Lotto White'	Impatiens wallerana cvs:	Dianthus 'Melody Pink'	'Sonic Scarlet Blush'	'Supersonic Pastel Pink'
Cerinthe 'Kiwi Blue'	'Olympia Sprint Red'	'Fanciful Orchid Rose'	Impatiens cultivars:	'Sonic Sweet Cherry'	Impatiens wallerana cvs:
Chrysanthemum 'Gold Sticks'	'Olympia Sprint Rose'	'Super Elfin Blue Pearl'	'Carnival Metallic Deep Salmon'	'Supersonic Pastel Pink'	'Carnival Deep Pink'
Cuphea 'Firefly'	'Olympia Sprint White'	Pelargonium cultivars:	'Carnival Metallic Lilac'	Impatiens wallerana cultivars:	'Carnival Deep Rose'
Dianthus 'Diamond Blush Pink'	'Party Red-Bronze Leaf'	'Black Magic Rose'	'Carnival Orange'	'Fanciful Orchid Rose'	'Carnival Metallic Deep Salmo
Dianthus 'First Love'	'Partyfun'	'Brasil 99'	'Carnival Salmon'	'Fanciful Red'	'Carnival Orange'
Dianthus 'Melody Pink'	'Senator Mix'	'Happy Violet'	Ipomoea 'Citronella'	'Fanciful Salmon'	'Carnival Salmon'
Eustoma 'Echo Mix'	'Senator Red'	'Lambada'	Ipomoea (Firecracker Vine)	'Stardust Rose Improved'	'Fanciful Coral'
Eustoma 'Echo Pink'	'Senator White'	'Salmon Compact Cascade'	Pelargonium cultivars:	Pelargonium cultivars:	'Fanciful Red'
Eustoma 'Echo Pink Picotee'	'Super Olympia Pink'	Petunia(hedgiflora) cvs:	'Appleblossom'	'Black Magic Rose'	'Fanciful Salmon'
Gazania 'Kiss Mix'	'Super Olympia Red'	'Tidal Wave Cherry'	'Black Magic Rose'	'Bravo'	'Stardust Rose Improved'
Gazania 'Talent Orange'	'Super Olympia White'	Petunia(prostrate) cvs:	'Bravo'	'Happy Orange'	'Super Elfin Blue Pearl'
Gazania 'Talent White'	'Victory Bronze Leaf Mix'	'Lavender Wave'	'Charleston 2000'	'Salmon Compact Cascade'	Osteospermum 'Passion Mix'
Gomphrena 'Mix'	'Victory Green Leaf Mix'	'Lime Surfinia'	'Charmant'	'White Glitter'	Pelargonium cultivars:
Gypsophila 'Garden Bride'	'Vodka'	'Misty Lilac Wave'	'Happy Orange'	Petunia(floribunda) cvs:	'Black Magic Rose'
Gypsophila 'Gypsy'	Capsicum 'Chilly Chili'	'Purple Wave'	'Happy Violet'	'Double Madness Pink'	'Bravo'
Helianthus 'Sundown'	Catharanthus(Vinca) cultivars:	'Rose Wave'	'Salmon Compact Cascade'	'Double Madness Pink Satin'	'Schoene Helena'

Helichrysum 'Bikini Mix' Ipomoea alba (Moon Vine) Ipomoea 'Citronella' Ipomoea (Firecracker Vine) Ipomoea 'Cardinal Climber' Lablab (Hyacinth Bean) Lobularia 'Snow Crystals' Lobularia 'Snowcloth Improved' Melampodium 'Showstar' Nierembergia 'Purple Robe' Pelargonium cultivars: 'Black Magic Rose' 'Brasil 99' 'Bravo' 'Bright Cascade' 'Charleston 2000' 'Diabolo 98' 'Happy Violet' 'Lambada' 'Maverick Coral' 'Maverick Pink' 'Maverick Star' 'Maverick Violet' 'Mexicana' 'Orbit Mix' 'Rocky Mountain Red' 'Salmon Compact Cascade' 'Schoene Helena' 'Tango Neon Purple' Pennisetum (Fountain Grass) Petunia(floribunda) cvs: 'Double Madness Pink' 'Double Madness Pink Satin' **'Double Madness Sheer** Improved' Petunia(grandiflora) cvs: 'Double Cascade Orchid Mix' 'Dreams Mix - Waterfall' 'Dreams Mix - Wild Rose' 'Ultra Limited Edition Mix' 'White Storm'

'Cooler Red' 'First Kiss Blush' 'Jaio Scarlet Eye' 'Merlot Mix' Catharanthus 'Pacifica Peach' Celosia cultivars: 'Flamingo Feather' 'New Look' 'Pink Candle' 'Prestige Scarlet' 'Purple Flamingo' Chrvsanthemum 'Gold Sticks' Cladanthus 'Criss-Cross' Cleome 'Sparkler Blush' Cuphea 'Allyson' Cuphea 'Firefly' Dahlia 'Garden Pride' Dianthus 'Diamond Blush Pink' Dianthus 'First Love' Dianthus 'Melody Pink' Diascia 'Pink Queen' Eustoma 'Forever Blue' Eustoma 'Heidi Hybrid' Gaillardia 'Red Plume' Gaillardia 'Yellow Sun' Gomphrena'Gnome' Gomphrena 'Mix' Gomphrena 'Strawberry Fields' Hypoestes 'Confetti Mix' Impatiens wallerana cvs: 'Carnival Metallic Deep Salmon' 'Carnival Salmon' 'Dazzler Pink Improved' 'Fanciful Coral' 'Fanciful Salmon' 'Stardust Rose Improved' 'Swirl Raspberry' Incarvillea 'Cheron' Ipomoea 'Citronella'

Ipomoea (Firecracker Vine)

'Trailing Purple' Stipa 'Angel Hair' Viola 'Ultimo Morpho' Zinnia 'Crystal White'

'Schoene Helena' 'Tango Neon Purple' 'White Glitter' Pennisetum (Fountain Grass) Pentas 'Butterfly Blush' Petunia(floribunda) cvs: 'Double Madness Pink' 'Double Madness Pink Satin' 'Double Madness Sheer Improved' 'Madness Magenta' Petunia(grandiflora) cvs: 'Candypops Summertime' 'Prism Sunshine' Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(prostrate) cvs: 'Lavender Wave' 'Lime Surfinia' 'Misty Lilac Wave' 'Pink Wave' 'Pink Wave Exp. 99wp5' 'Purple Wave' 'Rose Wave' 'Trailing Purple' 'Trailing Red' Phaseolus'Scarlet Emperor' Rudbeckia 'Cherokee Sunset' Stipa 'Angel Hair' Tagetes 'Bonanza Gold' Tithonia 'Fiesta del Sol' Zinnia 'Profusion Cherry' Zinnia 'Profusion Orange' Zinnia 'Profusion White'

'Madness Magenta' Petunia(grandiflora) cvs: 'Candypops Summertime' 'Prism Sunshine' Petunia(hedgiflora) cvs: Satin' 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(prostrate) cvs: 'Misty Lilac Wave' 'Pink Wave' 'Rose Wave' 'Trailing Purple' Phlox '21st Century Patriot Viola 'Ultimo Morpho'

Mix'

'Tango Neon Purple' Pennisetum (Fountain Grass) Petunia(floribunda) cvs: 'Double Madness Pink' Petunia 'Double Madness Pink **'Double Madness Sheer** Improved' 'Madness Magenta' Petunia(grandiflora) cvs: 'Candypops Summertime' 'Prism Sunshine' Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(prostrate) cvs: 'Giant Purple Surfinia' 'Lavender Wave' 'Lime Surfinia' 'Misty Lilac Wave' 'Pink Wave' 'Pink Wave Exp. 99w5' 'Purple Wave' 'Rose Wave' 'Trailing Purple' 'Trailing Red' Phlox 'Crystal Mix' Phlox '21st Century Patriot Mix' Rudbeckia 'Cherokee Sunset' Sanvitalia 'Aztec Gold' Tagetes(French marigold) cvs: 'Bonanza Bolero' 'Bonanza Gold' 'Bonanza Orange' Trachelium 'Devotion Blue' Verbena 'Quartz Blue' Verbena 'Salmon Tapien'

Viola 'Ultimo Morpho'

Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(milliflora) cvs: 'Fantasy Pink Morn' Petunia(multiflora) cvs: 'PrimeTime Blue' 'PrimeTime Lavender' 'PrimeTime Light Blue' 'PrimeTime Pink' 'PrimeTime Pink Morn' 'PrimeTime Rose' Petunia(prostrate) cvs: 'Pink Wave' 'Purple Wave' 'Trailing Purple' Phaseolus 'Scarlet Emperor' Portulaca 'Margarita Rosita' Portulaca 'Sundial Peach' Rudbeckia 'Cherokee Sunset' Rudbeckia 'Sonora' Scabiosa 'QIS Scarlet' Scabiosa 'Sweet Scabious Mix' Stipa 'Angel Hair' Tagetes (African marigold) cvs: 'American Indian Yellow' 'Antigua Gold' 'Antigua Orange' 'Discovery Orange' 'Discovery Yellow' 'Inca Gold' 'Inca Orange' 'Inca II Yellow' 'Perfection Orange' 'Perfection Yellow' Tagetes(French marigold) cvs: 'Aurora Mix' 'Bonanza Bolero' 'Bonanza Gold' 'Bonanza Orange'

Ipomoea 'Cardinal Climber' Lablab (Hyacinth Bean) Limonium 'Sunset' Lobularia cultivars: 'Easter Basket Mix' 'Golf' Lobularia 'Pastel Carpet' 'Snow Crystals' 'Snowcloth Improved' Melampodium 'Showstar' Monarda 'Lambada' Nierembergia 'Purple Robe' Pelargonium cultivars: 'Black Magic Rose' 'Diabolo 98' 'Happy Violet' 'Maverick Light Salmon' 'Maverick White' 'Mexicana' 'Salmon Compact Cascade' 'Samba' 'Schoene Helena' 'Tango' Pennisetum(Fountain Grass) Pentas 'Butterfly Blush' Pentas 'Butterfly Cherry Red' Petunia(floribunda) cvs: 'Double Madness Sheer Improved' Petunia(grandiflora) cvs: 'Candypops Summertime' 'Double Cascade Orchid Mix' 'Lavender Storm' 'White Storm' Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(milliflora) cvs: 'Fantasy Pink Morn' Petunia(multiflora) cvs:

'PrimeTime Fiesta Mix'

Thunbergia(Black-eyed Susan Vine) Thymophylla (Dahlberg Daisy) Tropaeolum 'Moonlight' Tropaeolum 'Whirlybird Mix' Verbena cultivars: 'Imagination' 'Novalis Deep Blue/White Eye' 'Quartz Red Eye' 'Quartz Scarlet' 'Quartz Waterfall Mix' 'Salmon Tapien' 'White Temari' Xeranthemum (Immortelle) Zinnia cultivars: 'Crystal White' 'Star Bright Mix' 'Profusion Cherry' 'Profusion Orange'

'PrimeTime Lavender' 'PrimeTime Light Blue' 'PrimeTime Rose' Petunia(prostrate) cvs: 'Giant Purple Surfinia' 'Lavender Wave' 'Misty Lilac Wave' 'Purple Wave' 'Rambling Burgundy Chrome' 'Rambling Shades O' Pink' Phaseolus 'Scarlet Emperor' Salvia 'Cirrus' Salvia 'Snow Nymph' Stipa 'Angel Hair' Tagetes(African marigold) cvs: 'Antigua Gold' 'Discovery Yellow' 'Inca Orange' 'Perfection Orange' 'Perfection Yellow' Tagetes(French marigold) cvs: 'Bonanza Bolero' 'Bonanza Mix' 'Bonanza Orange' 'Safari Yellow' Tanacetum 'Silver Feather' Thunbergia(Black-eyed Susan vine) Zinnia cultivars: 'Benary's Giant Mix' 'Crystal White' 'Profusion Cherry' 'Profusion Orange' 'Profusion White'

#### 2001 Star Performers

Star performers received \*, \*\* or \*\*\* during both evaluation times as seen on the 'Height and Spread Measurements Table' on pages 10-20.

#### Fargo

Antirrhinum 'Purple Ribbon' Asarina 'Joan Lorraine' Begonia cultivars: 'All Round Mix' 'Lotto White' 'Party Red-Bronze Leaf' 'Super Olympia Pink'

'Super Olympia Red' 'Super Olympia White' 'Vodka'

Capsicum 'Chilly Chili'

Celosia 'Prestige Scarlet' Celosia 'Purple Flamingo' Chrysanthemum 'Gold Sticks' Cuphea 'Firefly' Dianthus 'Diamond Blush Pink' Dianthus 'First Love' Dianthus 'Melody Pink' Gomphrena 'Mix' Ipomoea 'Citronella' Ipomoea (Firecracker Vine) Ipomoea 'Cardinal Climber' Lablab (Hyacinth Bean) Lobularia 'Snow Crystals' Lobularia 'Snowcloth Improved' Melampodium 'Showstar' Nierembergia 'Purple Robe' Pelargonium cultivars: 'Black Magic Rose' 'Diabolo 98' 'Happy Violet' 'Mexicana' 'Salmon Compact Cascade' 'Schoene Helena' Pennisetum (Fountain Grass) Petunia (floribunda) cvs:

'Double Madness Sheer Improved'

Petunia(grandiflora) cvs: 'Double Cascade Orchid Mix' 'White Storm' Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(milliflora) cvs: 'Fantasy Pink Morn' Petunia(multiflora) cvs: 'PrimeTime Lavender' 'PrimeTime Light Blue' 'PrimeTime Rose' Petunia(prostrate) cvs: 'Purple Wave' Phaseolus 'Scarlet Emperor' Stipa 'Angel Hair' Tagetes (African marigold) cvs: 'Antigua Gold' 'Discovery Yellow' 'Inca Orange' 'Perfection Orange' 'Perfection Yellow' Tagetes(French marigold) cvs: 'Bonanza Bolero' 'Bonanza Orange' Thunbergia (Black-eyed Susan Vine) Zinnia 'Crystal White' Zinnia 'Profusion Cherry' Zinnia 'Profusion Orange'

Dickinson Begonia cultivars: 'Lotto White' 'Olympia Sprint Red' 'Olympia Sprint White' 'Party Red-Bronze Leaf' 'Super Olympia Red' 'Super Olympia Rose' 'Vodka' Pelargonium cultivars: 'Happy Violet' 'Salmon Compact Cascade' Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' Petunia(prostrate) cvs: 'Lavender Wave' 'Lime Surfinia' 'Misty Lilac Wave' 'Purple Wave' 'Rose Wave' 'Trailing Purple' Stipa 'Angel Hair'

Williston Begonia cultivars: 'Ambassador Pink' 'Olympia Sprint Red' 'Olympia Sprint Rose' 'Olympia Sprint White' 'Super Olympia Pink' 'Super Olympia Red' 'Super Olympia Rose' 'Super Olympia White' 'Vodka' Impatiens (New Guinea) cvs: 'Harmony White' 'Supersonic Pastel Pink' mpatiens wallerana cultivars: 'Fanciful Red' 'Fanciful Salmon' 'Stardust Rose Improved' Pelargonium cultivars: 'Black Magic Rose' 'Bravo' Petunia(floribunda) cvs: 'Double Madness Pink' 'Double Madness Pink Satin' 'Madness Magenta' Petunia(grandiflora) cvs: 'Candypops Summertime' 'Prism Sunshine' Petunia(hedgiflora) cvs: 'Tidal Wave Cherry' 'Tidal Wave Hot Pink' 'Tidal Wave Silver' Petunia(prostrate) cvs: 'Misty Lilac Wave' 'Pink Wave' 'Rose Wave' 'Trailing Purple'

Phlox '21st Century Patriot Mix' Viola 'Ultimo Morpho'

#### Height and Spread Measurements

NDSU Bedding Plant Trials-2001

Note - An \* preceding a cultivar measurement indicates it was doing well during that evaluation time but lacking uniformity in height or bloom; \*\* indicates a top performer with good bloom, vigor and uniformity; \*\*\* indicates outstanding performance. All measurements are in inches except where noted and parenthesis indicate missing data. Shaded areas show that cultivars weren't tested at that location. Seed source list is on last page of report.

	Fargo				Dickinso	n		P-0	Willistor	h		
	July 18, 1	19	Aug. 30-S	ept. 11	July 11		August 2	25	July 12		August 2	4
Genus species 'Cultivar' (seed source)	Height	Spread	Height	Spread	Height	Spread	Height	Spread	Height	Spread	Height	Spread
Abelmoschus manihot 'Pink' (Pk)	2"	6"	12"	14"								
Abutilon x hybridum 'Bella Apricot' (PAS)	4-6	4-8	*12-14	*12-14	6"	6"	8-10"	8-10"	3-6"	4-8"	6-8"	4-10"
A. x hybridum 'Bella Coral Deep' (PAS)	4-8	4-10	*12-16	*15-18	4-6	4-6	6-10	6-14	2-6	2-6	3-8	4-10
A. x hybridum 'Bella Red' (PAS)	4-8	4-10	*12-14	*12-14	6-8	6-8	6-10	8-12	2-4	2-4	1-4	1-6
A. x hybridum 'Bella Salmon' (PAS)	4-12	4-12	*12-20	*12-20	6-10	6-8	8-15	12-16	3-6	3-6	3-8	3-8
Agastache cana 'Heather Queen' (Pk)	10-12	8-12	**28-30	**28-30								
A. foeniculum 'Blue Spike' (Pk)	8-12	8-12	20-30	15-20								
Ageratum houstonianum 'Azure Pearl' (WG)	3-4	6-8	4-7	6-10								
A. houstonianum 'Blue Hawaii' (Bod)	3-6	6-8	6-8	8-12								
A. houstonianum 'Blue Horizon' (Pk)	**12-14	**12-16	18-20	12-20								
A. houstonianum 'Blue Lagoon' (Pk)	4-6	6-8	*6-8	*9-12								
A. houstonianum 'Fields Blue' (Nov)	2-6	8-12	*8-12	*14-20								
A. houstonianum 'Hawaii Royal' (Pk)	3-8	4-10	4-8	8-14								
A. houstonianum 'Hawaii Shell Pink' (Pk)	2-6	3-8	6-8	10-15								
A. houstonianum 'Leilani Blue' (GS)	8-10	10-14	12-14	14-24								
A. houstonianum 'Neptune Blue' (GS)	6	6-8	6-8	8-10								
A. houstonianum 'Silver Pearl' (WG)	4-6	6-8	6-8	8-12								
A. houstonianum 'True Blue' (Gri)	4-8	8-12	*8-12	*12-15								
Alstroemeria x hybrida 'Jazze Purple Rose (PAS)	<sup>2</sup> ' 3-8	4-8	6-10	8-10	2-4	2-8	4-8	6-8				
A. x hybrida 'Jazze Rose Deep' (PAS)	3-8	4-8	6-14	8-12								
A. x hybrida 'Jazze Rose Frost' (PAS)	3-8	4-10	8-14	6-12	4-6	4-8	4-12	4-10	2-6	2-8	3-6	3-8
Amaranthus caudatus x A.	20-24	15-18	24-32	to 36								
hypochondriacus 'Magic Fountains'												
A. hypochondriacus 'Pigmy Torch' (Pk)	6-12	6-8	10-12	fell over								
A. tricolor 'Aurora' (Pk)		**12-15	18-36	12-20								
A. tricolor 'Illumination' (Pk)	*10-12	*8-12	6-15	10-20								
Ammi visagna 'Green Mist' (Pk)		**18-20	22-24	24-28								
Ammobium alatum 'Bikini' (Pk)	6-14	6-12	10-15	10-14								
Anagallis monellii 'Blue Light' (Pk)	3-6	4-8	6-10	14-20								
Antirrhinum majus 'Chimes Mixture' (GS)	4-8	4-8	6-8	8-12								
A. majus 'Crimson Ribbon' (GS)	15-18	6-8	15-20	12-18								
A. majus 'Floral Showers' (Pk)	4-12	4-10	8-10	10-14								
A. majus 'LaBella Mixture' (GS)	15-18	6-8	16-20	12-15								
A. majus 'Lavender Ribbon' (GS)	12-18	6-10	15-18	10-15								
A. majus 'Light Pink Ribbon' (GS)	12-14	8-10	12-15	10-15								
A. majus 'Purple Ribbon' (GS)	**15-18	**8-10	*20-24	*15-18								
A. majus 'Rocket Mix' (Pk)	8-16	6-10	18-24	12-15								
A. majus 'Rose Ribbon' (GS)	10-16	8-10	18-20	12-15								
A. majus 'White Ribbon' (GS)	12-14	6-10	12-18	8-10								
A. majus 'Yellow Ribbon' (GS)	10-16	6-8	15-18	12-15								
Arctotis venusta (Pk)	**18-24'	' **12-15"	18-24"	15-20"								
Artemisia annua (Pk)	to 36	18-20	6'+	4'								
Asarina scandens 'Joan Lorraine' (Pk)	**to 3'	**vining	**vining	**vining	to 20"	12"	**to 6'	**2'	6-8"	6"	to 48"	vining
A. scandens 'Mystic Pink' (Pk)	to 1'	3"	**vining	**vining	6	12	to 40"	vining	to 2'	6-8	**to 48	**vining
A. x wislizensis 'Red Dragon' (Pk)	6"	vining	4"	4"	6	6	6	6				
Asclepias curassavica 'Red Butterfly' (Pk)	6	6	12-15	10-12								
A. curassavica 'Silky Gold' (Pk)	6-8	6-8	15-18	10-12								
,												

Begonia x semperflorens-cultorum 'Alfa												
mix' (Da)	3-4	4-5	6-8	6-10								
B. x semperflorens-cultorum 'All Round	**6-9	**6	**14-15	**12-15								
Mix' (Da) B. x semperflorens-cultorum 'Ambassado	or											
Mix' (Da)	0	6	*6-8	*8-10								
B. x semperflorens-cultorum 'Ambassado	<sup>or</sup> 2-3	2-3	*5-6	*6-7	6-8	6-8	12	12	*4-8"	*4-8	**10-12	**8-10
Pink' (Da) B. x semperflorens-cultorum 'Ambassado	or_											
Rose' (Da)	5	3	4-6	5-8	4-8	4-8	6-10	6-12	2-6	4-6	6-8	8-10
B. x semperflorens-cultorum 'Ambassado Rose Blush' (Da)	<sup>or</sup> 2-3	2-3	5-6	6-8								
B. x semperflorens-cultorum 'Ambassado	or a a	2.4	4.0	го								
Scarlet' (Da)		3-4	4-8	5-8								
B. x semperflorens-cultorum 'Ambassado White' (Da)	or 4	6	4-5	4-8								
B. x semperflorens-cultorum 'Dragon	2-4	2-6	4-9	6-12								
Wing Pink' (PAS)		2-0	4-9	0-12								
B. x semperflorens-cultorum 'Inferno Miz (Da)	4-6	6	*12	*12								
B. x semperflorens-cultorum 'Lotto	4	4-6	**8-10	**8-12	8-10	8-10	12-14	10-12	6-8	6-8	8-10	8-12
Scarlet' (Ben)		40	0 10	0 12	0 10	0 10	12 14	10 12	00	00	0 10	0 12
B. x semperflorens-cultorum 'Lotto White (Ben)	<sup>e</sup> **6	**6	**8-10	**10-12	**10-12	**10-12	**12-18	**15-18	4-6	8-10	10-12	8-10
B. x semperflorens-cultorum 'Olympia	3-6	3-6	**6-9	**6-10	**8-10	**8-10	**14	**12-14	**4-6	**6-8	**10	**8-10
Sprint Red' (Ben) B. x semperflorens-cultorum 'Olympia	50	50	0.5	0 10	0 10	0 10	1.	12 11	10	00	10	0 10
Sprint Rose' (Ben)	2-4	3-4	*5-9	*6-9	**6-8	**6	6-10	6-12	*4-8	*4-10	**10	**8-10
B. x semperflorens-cultorum 'Olympia	4	4-6	**6-8	**6-8	**8	**8	**12	**10-12	**4-6	**6-8	**8-10	**8-10
Sprint White' (Ben) B. x semperflorens-cultorum 'Party Red-												
Bronze Leaf' (Ben)	**4-6	**4-6	**8-12	**8-12	**8-10	**8-10	*12-16	*12-14	**8-10	**8-10	12	8-10
B. x semperflorens-cultorum 'Partyfun'	4-6	4-6	*9-12	*9-12								
(Ben) B. x semperflorens-cultorum 'Queen Pinl	c'											
(Da)	6	6	8-10	8-10	6-10	6-10	10-15	10-12	8	8	12	8-10
B. x semperflorens-cultorum 'Queen Red	2-5	3-6	4-8	4-12	6-8	8-10	8-12	7-12				
(Da) B. x semperflorens-cultorum 'Queen												
White' (Da)	2-4	4-6	3-8	5-9								
B. x semperflorens-cultorum 'Senator Mi	x' 4-5	4-6	*6-10	*6-10								
(Da) B. x semperflorens-cultorum 'Senator												
Pink' (Da)	2-3	3-4	2-5	2-6								
B. x semperflorens-cultorum 'Senator Re (Da)	d' 2-4	5-6	**4-7	**5-8	6-8	6-10	8-11	8-10	4-6	4-8	8-10	8-10
B. x semperflorens-cultorum 'Senator	2.2	2.4	2.6	27	16	4.6	4 10	6 1 2	4.6	6.9	c 10	6 10
Rose' (Da)	2-3	3-4	3-6	3-7	4-6	4-6	4-10	6-12	4-6	6-8	6-10	6-10
B. x semperflorens-cultorum 'Senator White' (Da)	3-4	3-4	**5-7	**5-8								
B. x semperflorens-cultorum 'Super	*3	*4	*5-6	*6-8	**8	**8	9-14	6-12	**8	**8	**10-12	**0 10
Olympia Pink' (Ben)	3	4	5-0	0-0	0	0	5-14	0-12	8	0	10-12	8-10
B. x semperflorens-cultorum 'Super Olympia Red' (Ben)	**3-5	**4-6	**6-8	**8-10	**8	**8	**10-12	**10-12	**8	**8	**10	**10
B. x semperflorens-cultorum 'Super	**4-5	**4-6	6-8	6-8	**8-10	**8-10	**12	**12	**8	**8	**10	**10
Olympia Rose' (Ben) B. x semperflorens-cultorum 'Super	75	40	00	00	0 10	0 10	12	12	0	0	10	10
Olympia White' (Ben)	**4	**4-6	*6-8	*6-10	6-10	6-10	**12	**12	**8	**8	**10	**10
B. x semperflorens-cultorum 'Victory	6	4-6	*6-8	*8-10								
Bronze Leaf Mix' (GS) B. x semperflorens-cultorum 'Victory	U U	10	00	0 10								
Green Leaf Mix' (GS)	3-6	4-6	*8-10	*8-10								
B. x semperflorens-cultorum 'Vodka' (Be		**4-6	**6-8	**6-10	**6-8	**8-10	**8-10	**10-12	**8	**6	**10	**10
	n)**4			<i>c</i>								
B. x tuberhybrida 'Fortune Mix' (Da)	n)**4 2-4	2-5	4-5	6								
B. x tuberhybrida 'Fortune Mix' (Da) B. x tuberhybrida 'Galaxy Mix' (Da)			4-5 2-4	2-5								
B. x tuberhybrida 'Galaxy Mix' (Da) B. x tuberhybrida 'Pin Up Flame' (AAS '99	2-4 2-3 0) 2-3	2-5 3-4 3-4	2-4 4-7	2-5 6-8	8-10	8-10	7-12	10-12	4-8	4-8	8-10	8-10
B. x tuberhybrida 'Galaxy Mix' (Da) B. x tuberhybrida 'Pin Up Flame' (AAS '99 Beta vulgaris var. cicla 'Bright Lights' (Pk)	2-4 2-3 ) 2-3 to 24"	2-5 3-4 3-4 18-24"	2-4 4-7 24-30"	2-5 6-8 24-36"	8-10	8-10	7-12	10-12	4-8	4-8	8-10	8-10
B. x tuberhybrida 'Galaxy Mix' (Da) B. x tuberhybrida 'Pin Up Flame' (AAS '99 Beta vulgaris var. cicla 'Bright Lights' (Pk) B. vulgaris 'Gourmet Burgundy' (Gri)	2-4 2-3 ) 2-3 to 24" 10-12	2-5 3-4 3-4 18-24" 10-12	2-4 4-7 24-30" 15-18	2-5 6-8 24-36" 18-30	8-10	8-10	7-12	10-12	4-8	4-8	8-10	8-10
<ul> <li>B. x tuberhybrida 'Galaxy Mix' (Da)</li> <li>B. x tuberhybrida 'Pin Up Flame' (AAS '99)</li> <li>Beta vulgaris var. cicla 'Bright Lights' (Pk)</li> <li>B. vulgaris 'Gourmet Burgundy' (Gri)</li> <li>Bidens ferulifolia 'Golden Goddess' (Pk)</li> </ul>	2-4 2-3 0) 2-3 to 24" 10-12 10-12	2-5 3-4 3-4 18-24"	2-4 4-7 24-30"	2-5 6-8 24-36"	8-10	8-10	7-12	10-12	4-8	4-8	8-10	8-10
B. x tuberhybrida 'Galaxy Mix' (Da) B. x tuberhybrida 'Pin Up Flame' (AAS '99 Beta vulgaris var. cicla 'Bright Lights' (Pk) B. vulgaris 'Gourmet Burgundy' (Gri)	2-4 2-3 0) 2-3 to 24" 10-12 10-12	2-5 3-4 3-4 18-24" 10-12	2-4 4-7 24-30" 15-18	2-5 6-8 24-36" 18-30	8-10	8-10	7-12	10-12	4-8	4-8	8-10	8-10

B. oleracea 'Nagoya Mix' (Pk)	6-12	10-12	12-15	12-14								
B. oleracea 'Peacock Mix' (Pk)	12-15	12-15	18-24	18-20								
Briza maxima (Quaking Grass) (Pk)	12-14	6-8	died		**15"	**12"	15"	12"				
Calendula officinalis 'Prince Mix' (Pk)	12-18	6-8	14-20	12-14	1							
C. officinalis 'Touch of Red Buff' (Pk)	10-12	8-12	12-14	12-16								
Calibrachoa 'Trailing Orchid Pink' (BCG)	2	2-3	2-3	2-6	1	1-2	died		2"	4-6"	*2"	*12-18"
Callistephus chinensis 'Florette Mix' (CG)	8-20	6-8	18-20	14-16					I			
Capsicum annuum 'Chilly Chili' (PAS, AAS '02)	*8-11	*4-6	**8-10	**8-10	8-10	6	*8-12	*8-10	2-6	2	4-9	4-8
Catharanthus roseus 'Cooler Red' (PAS)	4	4-6	**10	**12								
C. roseus 'First Kiss Blush' (Ben)	2-4	4-6	**10	**10-12	3-4	2-6	**10	**12-14	1-3	2-3	4-6	4-6
C. roseus 'First Kiss Coral' (Ben)	2-4	2-5	8-12	8-12	4	4	**10	**10	2-3	2-3	2-5	4-6
C. roseus 'First Kiss Polka Dot' (Ben)	2-4	2-4	6-10	6-12	6	6	**10-12	**10-12	2-3	3-4	4-6	4-8
C. roseus 'First Kiss Ruby' (Ben)	2-6	4-5	6-10	8-12	4	4	**10	**10	2-3	2-3	4-6	4-6
C. roseus 'Heat Wave Mix' (Bod)	2-4	2-6	8-10	8-12								
C. roseus 'Jaio Scarlet Eye' (AAS '02)	4-6	4-6	**10-12	**10-12	2-6	3-5	8-12	10-14	2	2-3	6	6
C. roseus 'Mediterranean Mix' (WG)	4-5	4-8	4-8	12-15								
C. roseus 'Merlot Mix' (Ball)	2-4	2-6	*6-8	*8-12	3-4	4-6	**10	**12-14	2-3	2-3	3-7	4-7
C. roseus 'Pacifica Coral' (WG)	3-4	3-4	8-10	6-12								
C. roseus 'Pacifica Mix Improved' (WG)	1-5	1-4	8-12	8-12								
C. roseus 'Pacifica Peach' (WG)	2-3	2-3	**8	**10-12								
C. roseus 'Stardust Orchid' (AAS '00)	4	4-6	6-10	8-12	4	3-4	8-10	12-14	2-3	2-3	4-6	4-8
C. roseus 'Sunsplash Cherry' (Gri)	4	4	8-10	10-12	2-6	3-6	10	10-14	2-4	2-4	6	5-7
C. roseus 'Sunsplash Lilac' (Gri)	1-5	2-4	6-8	8-12	1-5	1-5	6-10	10-14	1-2	2-3	4-5	3-6
C. roseus 'Trailing Lilac' (WG)	2-4	4-6	6-8	12-14								
C. roseus 'Trailing White' (WG)	2-4	2-4	4-6	10-14								
C. roseus 'Tutti Frutti Mix' (Ball)	2-4	3-4	8-10	12-14	2-4	2-6	8-10	8-15	1-3	2-3	4-8	4-8
Celosia cristata 'Amigo Mahogany Red' (Ben)	4-5	3-6	6	6								
C. cristata 'Amigo Mix' (Ben)	2-6	3-6	4-7	6-8								
<b>o</b> , , ,												
C. cristata 'Colours Pink' (Gri)	2-6	2-6	6-8	6-8	6-8	8	4-8	8	2-4	2-6	3-5	3-5
	2-6 *6-10	2-6 *2-8	6-8 **16-18	6-8 **12-15	6-8 12	8 4-6		8 ***12-14		2-6 2-4	3-5 *8-12	3-5 *6-12
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT)												
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97)	*6-10	*2-8	**16-18	**12-15								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT)	*6-10 4-10	*2-8 2-4	**16-18 8-12	**12-15 6-8								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT)	*6-10 4-10 6-8	*2-8 2-4 4	**16-18 8-12 8-10	**12-15 6-8 8-10								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur)	*6-10 4-10 6-8 4-8 8 10-18	*2-8 2-4 4 2-4	**16-18 8-12 8-10 6-8	**12-15 6-8 8-10 4-6								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben)	*6-10 4-10 6-8 4-8 8 10-18 8-15	*2-8 2-4 4 2-4 6-8 8-10 6-10	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur)	*6-10 4-10 6-8 4-8 8 10-18	*2-8 2-4 4 2-4 6-8 8-10	**16-18 8-12 8-10 6-8 **12-15 *30-36	**12-15 6-8 8-10 4-6 **14-16 *18-20								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18	*2-8 2-4 4 2-4 6-8 8-10 6-10	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk) Centaurea cyanis 'Frosted Queen Mix' (CG)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 ) 6-12 5-15"	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12"	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20"	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15"								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk) Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 ) 6-12 5-15"	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12"	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20"	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15"								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk) Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix'	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 6-12 5-15" 15-24	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20" 15-18	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix' (Pk)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12 5-15" 15-24 **12 8-22	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12 **15-18 8-15	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20" 15-18 12-14	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12 18-24								
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C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Purple Flamingo' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix' (Pk) C. vulgare 'Gold Sticks' (Pk) Cladanthus arabicus 'Criss-Cross' (Pk)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12 5-15" 15-24 **12 8-22 **20-26 4-8	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12 **15-18 8-15 **12-15 4-12	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20" 15-18 12-14 12-24 **24-30 *8-10	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12 18-24 15-18 **24 **24								
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C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'New Look' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Purple Flamingo' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix' (Pk) C. vulgare 'Gold Sticks' (Pk) Cladanthus arabicus 'Criss-Cross' (Pk) Cleome hasslerana 'Mix' (Pk) C. hasslerana 'Sparkler Blush' (AAS '02) C. serrulata 'Solo' (Pk)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12 5-15" 15-24 **12 8-22 **20-26 4-8 12-24 24 18-24 to 24	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12 **15-18 8-15 **12-15 4-12 2-10 15 12-20 12-18	**16-18 8-12 8-10 6-8 *30-36 *24-30 **30-36 8-12 18-20" 15-18 12-14 12-24 **24-30 *8-10 24-26 *30-36 20-22 fell over	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12 18-24 15-18 **24 *12-15 18-20 **24								
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Purple Flamingo' (Pk) C. spicata 'Purple Flamingo' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix' (Pk) C. vulgare 'Gold Sticks' (Pk) Cladanthus arabicus 'Criss-Cross' (Pk) Cleome hasslerana 'Mix' (Pk) C. hasslerana 'Sparkler Blush' (AAS '02) C. serrulata 'Solo' (Pk) Cosmos bipinnatus 'Early Wonder' (Pk)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12 5-15" 15-24 **12 8-22 **20-26 4-8 12-24 24 18-24 to 24 30	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12 **15-18 8-15 **12-15 4-12 2-10 15 12-20 12-18 12-30	**16-18 8-12 8-10 6-8 *30-36 *24-30 **30-36 8-12 18-20" 15-18 12-14 12-24 **24-30 *8-10 24-26 **30-36 20-22 fell over fell over	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12 18-24 15-18 **24 *12-15 18-20 **24 24	12		***12-14					
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Purple Flamingo' (Pk) C. spicata 'Purple Flamingo' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix' (Pk) C. vulgare 'Gold Sticks' (Pk) Cladanthus arabicus 'Criss-Cross' (Pk) Cleome hasslerana 'Mix' (Pk) C. hasslerana 'Sparkler Blush' (AAS '02) C. serrulata 'Solo' (Pk) Cosmos bipinnatus 'Early Wonder' (Pk) C. bipinnatus 'Psyche Mix' (Pk) C. sulfureus 'Bright Lights' (Pk) C. sulfureus 'Cosmic Orange' (Ben, AAS	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12 5-15" 15-24 **12 8-22 **20-26 4-8 12-24 24 18-24 18-24 to 24 30 24-30	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12 **15-18 8-15 **12-15 4-12 2-10 15 12-20 12-18 12-30 15-18	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20" 15-18 12-14 12-24 **24-30 *8-10 24-26 **30-36 20-22 fell over fell over 18-20	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12 18-24 15-18 **24 *12-15 18-20 **24 24	12	4-6	***12-14	***12-14	6-8	2-4	*8-12	*6-12
C. cristata 'Colours Pink' (Gri) C. cristata 'Prestige Scarlet' (AAS '97) C. plumosa 'Castle Mix' (AT) C. plumosa 'Castle Orange' (AT) C. plumosa 'Gloria Mix' (Ben) C. plumosa 'New Look' (Ben) C. spicata 'Flamingo Feather' (Bur) C. spicata 'Pink Candle' (Pk) C. spicata 'Pink Candle' (Pk) C. spicata 'Purple Flamingo' (Pk) Centaurea cyanis 'Dwarf Midget Mix' (Pk) Centaurea cyanis 'Frosted Queen Mix' (CG) C. cyanis 'Garnet' (Pk) Cerinthe major var. purpurescens 'Kiwi Blue' (Pk) Chrysanthemum carinatum 'Merry Mix' (Pk) C. vulgare 'Gold Sticks' (Pk) Cladanthus arabicus 'Criss-Cross' (Pk) Cleome hasslerana 'Mix' (Pk) C. hasslerana 'Sparkler Blush' (AAS '02) C. serrulata 'Solo' (Pk) Cosmos bipinnatus 'Early Wonder' (Pk) C. bipinnatus 'Psyche Mix' (Pk) C. sulfureus 'Bright Lights' (Pk) C. sulfureus 'Cosmic Orange' (Ben, AAS '00)	*6-10 4-10 6-8 4-8 8 10-18 8-15 *14-18 0 6-12 5-15" 15-24 **12 8-22 **20-26 4-8 12-24 24 18-24 to 24 30 24-30 12-20	*2-8 2-4 4 2-4 6-8 8-10 6-10 *10-12 4-6 6-12" 10-12 **15-18 8-15 **12-15 4-12 2-10 15 12-20 12-18 12-30 15-18 6-12	**16-18 8-12 8-10 6-8 **12-15 *30-36 *24-30 **30-36 8-12 18-20" 15-18 12-14 12-24 **24-30 *8-10 24-26 **30-36 20-22 fell over fell over 18-20 12-14	**12-15 6-8 8-10 4-6 **14-16 *18-20 *15-18 **24-30 6-10 12-15" 10-12 18-24 15-18 **24 *12-15 18-20 **24 24 18-20 8-12	12	4-6	***12-14	***12-14	6-8	2-4	*8-12	*6-12

Cuphea hyssopifolia 'Allyson' (Mexican												
Heather) (Pk)	6	6-8	**8-10	**12-14								
C. purpurea 'Firefly' (Pk)	**14-16		**18-20	**18-20								
Dahlia 'Bishop's Children' (Pk)	10-15	10-15	24-30	15-18								
D. 'Diablo Mix' (Pk)	8-12	6-12	14-16	14-16								
D. 'Double Pompon Mix' (Pk)	14-24	12-14	to 36	15-20								
D. 'Garden Pride' (Ben)	2-12	4-12	*12-20	*14-18								
D. 'Redskin' (WG)	12	10-12	18-24	15-18								
Dianthus chinensis 'Diamond Blush Pink' (Pk)	*6-8	*4-8	*6-8	*8-10								
D. chinensis 'First Love' (Ball)	*8-14	*6-10	*8-12	*6-8	**12-14	**6-10	12-18	10-14	8-12	4-6	10-14	8-12
D. chinensis 'Melody Pink' (AAS '00)	*10-14	*8-12	**14-16	**8-12	14-16	10-12	*16-18	*14	8-12	4-6	**12-15	**12-14
D. chinensis 'Super Parfait Rasperry' (Pk)	3-4	3-4	4-5	4-6								
D. chinensis 'Valentine' (PAS)	2-6	2-6	6	6								
D. chinensis 'Velvet 'N Lace' (Pk)	6-8	4-6	8-12	6-10								
Diascia barberae 'Pink Queen' (Pk)	4-8	3-4	*8-12	*10-12								
Emilia flammea 'Scarlet Magic' (Pk)	8-12	8-12	10-12	10-12								
Eustoma grandiflorum 'Echo Mix' (Pk)	**10-14	**4-6	10-14	6-8								
E. grandiflorum 'Echo Pink' (Pk)	*12-15	*4-6	10-12	6-8								
E. grandiflorum 'Echo Pink Picotee' (Pk)	*12-15	*4-8	8-15	6-10								
E. grandiflorum 'Forever Blue' (PAS, AAS	6-8	6-8	*8-10	*6-12	**6-8	**6-8	10	8-12	4-6	6-8	5-8	6-10
'01) E. grandiflorum 'Heidi Hybrid' (Pk)	12-14	4-6	*18-20	*8-10								
E. grandiflorum 'Lizzy Blue' (GS)	4-6	4-0 3-5	4-6	6								
E. grandiflorum 'Lizzy Pink' (GS)	4-0 4-6	3-5 4-6	4-8	6-8								
E. grandflorum 'Lizzy White' (GS)	4-8	4-6	8	6-8								
E. grandiflorum 'Red Glass' (Pk)	8-10	2-4	10-12	6								
Fragaria 'Berri Basket' (Ball)	2	2-4	2-4	2-4	6-8	6-8	6-8	8-12	4-6	6-8	6-8	8-12
F. 'Berries Galore' (Ball)	- 2-6	2-6	3-6	3-8	4-6	6-8	4-8	8-12	4-6	6-8	6-8	8-12
Fuchsia 'Snowfire Angel Earrings' (BCG)	2-4	2-4	4-6	4-6	2-4	4-6	4-5	6-8	2-4	4-6	4-6	6-8
Gaillardia pulchella 'Red Plume' (AAS '91)		8-12	**12-14	**12-14								
G. pulchella 'Yellow Sun' (Pk)	8-12	6-12	**12-16	**12-16								
Gazania rigens 'Daybreak Mix' (Pk)	4-8	6-10	8-10	8-12								
Gazania rigens 'Kiss Mix' (GS)	*4-6"	*8"	8-10"	8-10"								
G. rigens 'Talent Orange' (Ben)	*4-8	*6-10	8-11	8-12	2-6"	4-8"	8"	10-12"	1"	1-3"	2-6"	4-8"
G. rigens 'Talent Rose Shades' (Ben)	4-6	6-8	6-10	6-12	1-6	1-8	6-10	8-12	1-2	2-3	1-4	3-8
G. rigens 'Talent White' (Ben)	**6-8	**8-10	10-12	10-12	4-6	4-6	8-10	12-15	1-3	2-4	2-5	6
G. rigens 'Talent Yellow' (Ben)	6-8	8-10	8-10	8-12	4-6	4-10	5-12	8-14	2-3	2-3	2-6	3-6
Gomphrena globosa 'Gnome' (Pk)	6-8	6-10	**12-14	**12-14								
G. globosa 'Mix' (Pk)	*12-20	*10-12	**27-30	**15-20								
G. haageana 'Strawberry Fields' (Pk)	12-14	12-14	**27-30	**15-20								
Gypsophila muralis 'Garden Bride' (Da)	**3-4	**6-12	6-8	8-12	**4	**8	6	10-14	2-4	6-7	4-6	8-10
G. muralis 'Gypsy' (Da, AAS '97)	**3-4	**4-6	3-5	6-8	2-4	3-6	4-6	4-10	**2-3	**4-6	4	6-8
Helianthus annuus 'Chianti' (Ball)	36-40	15-24	falling ove	er	36-40	15-20	36-60	to 24	24	6-8	36-40	8-10
H. annuus 'Dorado' (Ball)	12-20	8-10	falling ove	er	24-30	10-12	40	18	15-20	6	died	
H. annuus 'Lemon Eclair' (Ball)	12-20	6-8	died		24-36	6-12	to 5'	to 24	15-18	6	died	
H. annuus 'Ring of Rire' (Ben, AAS '01)	to 36	15-18	to 36	12-15	24-36	12-20	to 48	to 24	20	6-8	36-40	8-10
H. annuus 'Soraya' (AAS '00)	to 40	15-18	to 48	10-15	30-36	12	to 5'	to 24	10-15	6	36-40	8-10
H. annuus 'Starburst Aura' (Ball)	18-20	6-10	died		30-36	12-15	48	24	15-20	6-8	died	
H. annuus 'Sundown' (Ball)	*36-40	*15-18	died		gone		gone		24-28	6-10	died	
Helichrysum bracteatum 'Bikini Mix' (JSS)	*6-8	*8-10	10-15	10-12								
H. bracteatum 'Fiery Mix' (Pk)	24-30	6-10	24-30	10-12								
H. monstrosum 'Mix' (Pk)	24-30	6-10	36-48	10-15								
Hypoestes phyllostachya 'Confetti Mix' (Da)	2-10	3-8	**14-18	**14-18								
Impatiens balsamina 'Carambole Mix' (Pk	) 6-8	4-6	4-8	5-7								
I. hawkerii 'Harmony Raspberry Cream' (FG)	2-3	3-4	3-4	3-7	**6	**6	4-6	6-8	**4	**6	5	6

I. hawkerii 'Harmony White' (FG)	3-4	4-6	6	7-8	4-6	4-6	6-8	6-8	*4-6	*6-8	**6-8	**8-10
I. hawkerii 'Java Cherry Rose' (PAS)	1-3	1-4	3-6	3-8	2-4	2-4	6-8	4-8	4-6	4-8	6-8	6-8
I. hawkerii 'Java Orange' (PAS)	1-2	2-3	3-5	4-6	2-4	4-6	4-5	4-6	2-4	2-4	3-5	5-6
I. hawkerii 'Java Pearl' (PAS)	1-2	2-3	2-6	5-8	2-4	2-4	4-8	4-8	2-4	2-6	3-5	6-8
I. hawkerii 'Sonic Amethyst' (FG)	2-3	3-4	died		2-6	4-8	4-6	8-10	2-4	4-6	4-5	4-8
I. hawkerii 'Sonic Dark Salmon' (FG)	3-4	4-6	4-6	4-8	4-6	4-6	6	6-8	4	6	5	6-8
I. hawkerii 'Sonic Fuchsia' (FG)	3-4	4-6	3-6	6-8	4-6	6	6	6-10	**4	**8	6-8	8-10
I. hawkerii 'Sonic Light Pink' (FG)	2	3	died		3-6	3-8	4-6	2-8	**4	**8	6	6
I. hawkerii 'Sonic Peach' (FG)	3-4	4-6	4-6	6-10	**6	**6-8	6	8-10	**6	**8	6-8	8-10
I. hawkerii 'Sonic Red' (FG)	3-4	3-6	3-6	4-10	4-6	4-6	6	8-10	4	6	**5	**6-8
I. hawkerii 'Sonic Scarlet Blush' (FG)	3-4	3-6	3-6	4-8	4-6	4-6	4-6	4-8	**4	**6-8	5	6-8
I. hawkerii 'Sonic Sweet Cherry' (FG)	3-4	4	4-6	3-6	4-6	4-6	6-7	6-8	**4	**6	6-8	6-8
I. hawkerii 'Supersonic Lavender' (FG)	3-4	3-4	died		4-6	4-6	6	8-10	4	6-8	*8-10	*8-10
I. hawkerii 'Supersonic Pastel Pink' (FG)	3-4	4	4-5	5-6	4-6	4-6	6	8-10	*4-6	*4-8	**7-9	**8-10
I. wallerana 'Accent Limited Edition Mix'	1-3	1-4	5-6	4-10								
(GS)					_				_	_		
I. wallerana 'Carnival Deep Pink' (Da)	4	6-8	6-11	12-14	2	4	6	12	2	6	**4-6	**10-12
I. wallerana 'Carnival Deep Rose' (Da)	4	6-8	8-10	12-14	4	2-6	4-5	8-12	2	6	**4	**10-12
I. wallerana 'Carnival Lavender Blue' (Da)	1-2	2-3	6	6-8	died		died		2-4	4-6	4-6	8-10
I. wallerana 'Carnival Lilac' (Da)	2-4	4-6	4-6	8-12	1-4	1-4	4-6	10-12	2-4	4-6	4-6	10-12
I. wallerana 'Carnival Metallic Deep	4-6	6-8	**10-12	**10-12	4-8	8-10	*8-12	*12-18	2-4	6-8	**4-6	**10-12
Salmon' (Da) I. wallerana 'Carnival Metallic Lilac' (Da)	4	6-8	6-8	6-12	8-10	8-10	**8-10	**14-16	2-6	6-8	4-6	10-12
I. wallerana 'Carnival Mix' (Da)	2-3	1-4	6-7	6-10	2-4	2-4	4-7	8-14	2-4	6	6-8	10-12
Impatiens wallerana 'Carnival Orange'												
(Da)	3-4"	4-6"	4-6"	6-10"	2-4"	6-8"	**8-10"	**12-14"	2-4"	6-8"	**3-5"	**10-12"
I. wallerana 'Carnival Red' (Da)	2-3	2-3	3-5	6-8	4	4	4-8	10-12	4	6	4-6	10-12
I. wallerana 'Carnival Salmon' (Da)	4-6	6-10	*12-14	*10-12	4-6	6-8	**8-10	**12-14	4-6	6-8	**6-8	**10-12
I. wallerana 'Carnival Scarlet' (Da)	3	3	4-5	8-10								
I. wallerana 'Carnival Violet' (Da)	1-2	2-3	4-5	4-7	2-3	2-3	3-4	4-5	2	4	2-4	6-8
I. wallerana 'Carnival White' (Da)	2-3	3-6	5-6	6-8	2	2	3-6	8-12	2-4	6	4-6	8-10
I. wallerana 'Circus Orange White' (PAS)	4-6	3-4	6-8	4-8	3-6	3-8	4-7	8-10	2-6	2-8	4-8	10-12
I. wallerana 'Dazzler Blue Pearl' (Ball)	3-4	4-6	4-7	6-12	6	6-8	4-5	8-12	4-6	8	4-6	10-12
I. wallerana 'Dazzler Pink Improved' (Ball)	3-4	6-8	**6-10	**10-12	6	4-6	6-8	8-12	2-6	6-8	2-6	8-10
I. wallerana 'Dazzler Star Mix' (Ball)	2-3	1-4	3-4	6-8	6-8	4-8	6-10	6-10	4	6	4-6	8-10
I. wallerana 'Fanciful Coral' (Ball)	4-6	6-8	**10-12	**10-12	6-8	6-8	10-11	10-12	6	8	**9	**12
I. wallerana 'Fanciful Orchid Rose' (Ball)	4-6	6-8	8-10	10-12	**6-8	**6-8	8-10	10-12	**6	**8	6-8	10-12
I. wallerana 'Fanciful Red' (Ball)	4-6	3-4	5-6	6-8	4-8	4-8	6-8	8-12	**6	**8	**6-8	**10-12
I. wallerana 'Fanciful Salmon' (Ball)	4-6	6-10	*12-15	*10-12	2-4	2-6	6-7	10-12	**6	**8	**8	**10-12
I. wallerana 'Mosaic Lilac' (GS)	3-4	4-6	6-8	8-12		20	0,1	10 12	U U	0	0	10 12
I. wallerana 'Mosaic Rose' (GS)	4-6	8	8-10	10-12								
I. wallerana 'Showstopper Buttercream'									-			
(Ball)	2-3	2-6	3-5	6-8	3-6	6-8	4-5	12	2	6-8	4-6	10-12
I. wallerana 'Showstopper Cotton Candy'	4	4-6	4-6	8-12	3-6	6-8	4-5	8-12	4	4-6	4-6	10-12
(Ball) I. wallerana 'Stardust Rose Improved'												
(PAS)	4-6	6-8	**6-8	**8-12	3-4	6-8	4-5	8-12	**4	**6	**6	**10-12
I. wallerana 'Stardust Salmon' (PAS)	3-4	6-8	8-10	10-12	3-4	6-8	4-6	10-12	4	6	4-6	10-12
I. wallerana 'Stardust Violet' (PAS)	2-4	3-6	4-6	5-8	4-6	4-8	3-4	6-12	4	6-8	4-6	8-12
I. wallerana 'Sun and Shade Pink Splash'	4	6-8	6-10	12-15	6-8	8-10	6-8	12-14	2-4	6-8	4-6	6-8
(Gri)	4				0-0	0-10	0-0	12-14	2-4	0-0	4-0	0-0
I. wallerana 'Sun and Shade Violet' (Gri)	2-4	3-4	2-6	5-10								
I. wallerana 'Super Elfin Blue Pearl' (PAS)		2-4	4-6	6-10	**6-8	**8-10	4-6	8-12	4-6	6-8	**6	**10-12
I. wallerana 'Super Elfin Pink Deep' (PAS)	4	6-8	4-6	6-12	2-6	2-6	4-5	10-12	2-4	4-8	2-6	8-10
I. wallerana 'Super Elfin Ruby' (PAS)	3-4	3-4	4-5	7-10	6-8	6-8	4-6	10	4	8-10	2-6	8-12
I. wallerana 'Swirl Raspberry' (PAS)	4-6	6-8	**10	**10-12	6-8	8-10	4-6	8-12	4-6	6-8	4-6	10-12
I. wallerana 'Victorian Rose' (AAS '98)	4-6	6-8	8-10	12-14	2-6	4-8	2-6	8-10	4	8	6-8	10-12
Incarvillea sinensis 'Cheron' (Pk)	8-12	4-8	**20-26	**15-18								
Ipomoea alba (Moon Vine) (Pk)	*to 48	*vining	vining	vining	12	6	8-10'	12-24				

I. batata 'Blackie' (Pk)	6-8	8-12	6-8	14-18	6-8	14-18	8-12	16-30	to 6	12	to 8	to 36	
I. x imperialis 'Mt. Fuji Mix' (Pk)	12	6-15	()	()									
I. (Mina)lobata 'Citronella' (Pk)	**48	**vining	*vining	*vining	to 5'	12	**8-10'	**vining	24-36	6-12	to 48	vining	
I. (Mina)lobata (Firecracker Vine) (Pk)	**48	**vining	*vining	*vining	to 5'	12	**8-10'	**12-24					
I. x multifida 'Cardinal Climber' (Pk)	**48	**vining	*vining	*vining	to 5'	2-3	8-10'	12"	to 18	8	to 48	vining	
I. nil 'Minibar Rose' (Pk)	8	10-12	()	()								-	
I. quamoclit (Cypress Vine) 'Mix' (Pk)	died		died	( )	6	6	to 3'	vining	2-4	6	can't find	ł	I
I. guamoclit (Cypress Vine) 'Red' (Pk)	died		died		6	6	to 6'	vining	2-3	4-6	to 15	6	ļ
Kniphofia uvaria 'Flamenco' (AAS '99)	18-20	8-12	12-30	10-12	14	4-6	14-36	12-18	6-12	4-6	8-14	6-10	
Lablab purpureus (Hyacinth Bean) (Pk)	**to 5'	**vining	**vining	**vining									
Lagarus ovatus (Hare's Tail Grass) (Pk)	15-20	6-10	12-20	()	12-18	10-12	18-20	12-16					
Leonotis leonarus 'Staircase' (Pk)	to 40	to 25	to 5 '	24									
Limonium sinuatum 'Sinuata Mix' (McF)	15-20	12-15	24-26	12-15									
L. sinuatum 'Soiree Mix' (Pk)	12-24	14-20	18-36	15-20									
L. sinuatum 'Sunset' (Pk)	18-20	12-15	**24-27	**18-20									
Lobelia erinus 'Blue Moon' (Nov)	2-3"	1-6"	4-5"	5-8"									
L. erinus 'Half Moon' (Nov)	2-3	4-6	4-6	6-8									
L. erinus 'Midnight Moon' (Nov)	3-4	2-6	4-8	4-8									
L. erinus 'Paper Moon' (Nov)	1-4	2-6	4-5	4-8									
L. erinus 'Rose Moon' (Nov)	2-3	2-3	3-4	4-5									
L. erinus 'Sky Moon' (Nov)	1-3	2-3	3-6	3-6									
Lobularia maritima 'Easter Basket Mix'													
(Pk)	2-6	4-10	**4-6	**12-14									
L. maritima 'Golf' (Cl)	3-4	8-12	**4-6	**10-12									
L. maritima 'Pastel Carpet' (Pk)	3-4	6-12	**4-6	**12-14									
L. maritima 'Snow Crystals' (RS)	*4-6	*10-12	**6	**12-15									
L. maritima 'Snowcloth Improved' (Pk)	**3	**11-12	**4-5	**14									
L. maritima 'Wonderland Mix' (Bod)	2-4	6-10	4-6	10-14									
Malope trifida 'Pink Queen' (Pk)	2-3	2-4	12-15	6-12									
M. trifida 'Vulcan' (Pk)	10-20	6-12	36	20									
Melampodium paludosum 'Derby' (Ben)	4-8	4-8	()	10-15									
M. paludosum 'Showstar' (Ben)	*4-10	*6-10	**14	**14									
Mirabilis jalapa 'Broken Colors Mix' (Pk)	8-15	10-12	18-20	18-20									
Monarda x hybrida 'Lambada' (Pk)	8-15	12-14	**24-26	**24									
Nicotiana alata 'Havana Appleblossom'	4	4	2-4	4-6									
(Da) N. alata 'Saratoga Red' (GS)	4	2	5	6									
N. alata 'Saratoga Rose' (GS)	6	6	5 5-6	6-8									
N. alata 'Saratoga White' (GS)	2-4	2-4	2-5	2-6									
N. x sanderae 'Avalon Bright Pink' (AAS													
'01)	2-6	4-6	4-6	6-8	6-8"	6-10"	7-12"	10-12"					
N. x sanderae 'Domino Mix' (Pk)	4-8	4-8	4-6	6-10									
N. sylvestris (Pk)	12	12	48-60	24									
Nierembergia hippomanica 'Purple Robe'	**6	**8-12	**8-10	**12-14									
(Pk) Ocimum basilicum 'Magical Michael'											I., .		1
(PAS)	8-10	6-10	12-15	12-16	10-12	10-12	12	12	died		died		
Osteospermum 'Passion Mix' (AAS '99)	10-12	8-10	14-20	12-16	6-12	8-10	10-15	14-18	10-12"	8-10"	*10-14"	*12-14"	
Pelargonium x hortorum Zonal													
geraniums	**8-10	**10-12	**11 16	**10 11	**10 13	**10 13	**15 16	**1E 10	**8-10	**8-10	**10 13	**12-14	
Black Magic Rose (AAS '02)	*8	*8	**14-16 6-12	**12-14	**8-10	**10-12 **8-10	12-14		8				
Brasil 99 (FG)	ہ **6-8	° **6-8		8-12			**14	14 **14	。 **6-8	8-10 **6-8	8 *6-10	10-12 *8 12	
Bravo (FG)			6-10 8 10	8-12	6-8	8-10						*8-12	
Charleston 2000 (FG)	**6	**8-10 8-12	8-10 8-10	10-12	4-8 4-8	6-10	**12-14	**12-14 **14-16	4-6 4-6	6-8	6-8	10-12 8-10	
Charmant (FG) Diabolo 98 (FG)	6-8 **8	8-12 **8-12	8-10 **8-10	10-12 **10-12	4-8 6-8	6-10 10.12			4-6 4-6	6-8 6-8	6-8 6-8	8-10 10-12	
Exotica Series:	o	0-12	0-10	10-12	0-0	10-12	10-12	12-14	4-0	0-0	0-0	10-12	
Appleblossom (FG)	8-10	8	8-12	6-10	8-10	8-10	**17 15	**12-15	6	6-8	8-10	10-12	
Happy Orange (FG)	8-10 6	8	8-12 10-12	10-10	8-10 3-6	8-10 6-8	**10-12		• **6-8	**8	8-10 8-10	8-12	
nappy oralige (FG)	U	o	10-12	10-12	5-0	0-0	10-12	14	0-0	o	0-10	0-12	

Happy Violet (FG)	**8	**8-10	**12-14	**12-14	**8	**8	**12-14	**10 15	6	6-8	8-10	10-12
Tricolor (FG)	o 6-8	4-8	12-14	8-12	° 2-6	° 3-6	3-12	6-12	0 4-6	0-8 4-6	8-10	10-12
White Glitter (FG)	8	4-8 8	10-12	3-12 10-12	2-0 8-10	10-12	**12-14		*6	*8	8-10	10-12
Maverick Coral (GS)		8 **10-12	14-16	12-16	8-10	10-12	12-14	14-10	0	0	8-10	10-12
Maverick Light Salmon (GS)	10-12	10-12	**14	**16								
Maverick Pink (GS)	*10-12	*10-12	12-14	10-14								
Maverick Red (GS)	8-10	8-10	8-12	6-14								
Geranium (cont.) Maverick Salmon (GS)	8-10"	8-10"	10-12"	10-14"								
Maverick Scarlet (GS)	8-12	8-10	10-12	10-12								
Maverick Star (GS)	*12	*12	12-14	12-16								
Maverick Violet (GS)	*8-10	*8-10	10-12	10-12								
Maverick White (GS)	10-12	8-10	**14	**18								
Multibloom Capri (GS)	6-8	6-8	6-8	8-10								
Orbit Mix (GS)	**8-10	**8-12	8-15	10-14								
Rocky Mountain Red (FG)	**8	**8-12	6-10	10-12	6-8"	10-12"	12-14"	12-15"	6-8"	6-8"	6-8"	10-12"
Samba (FG)	6	8	**6-8	**8-10	6-8	6-10	6-10	8-12	4-6	8-10	6-8	8-12
Schoene Helena (FG)	**6-8	**10-12	*10-15	*12-14	6-10	8-12	*8-15	*8-18	6-8	8-10	**10	**10-12
Stardust Mix (Pk)	6-8	6-8	7-12	6-10								
Tango (FG)	6-8	8-10	**6-10	**8-12	6-8	8	10-12	8-15	4-6	6-8	8	8-10
Tango Neon Purple (FG)	**8	**8	10-12	8-12	6-8	8-10	**14	**14	4-6	8-10	**8	**10
Tango White (FG)	6-8	8-10	5-8	6-10	6-8	7-8	10-14	8-12	4-6	8	6-7	8-10
P. peltatum Ivy Geraniums												
Cascade Geraniums												
Bright Cascade (FG)	**8	**10-12	to 12	12-14	6-12	12-14	12-14	12-15	6	10-12	8-10	12-14
Salmon Compact Cascade (FG)	**6-8	**10-12	*to 14	*14-18	**6-8	**14-16	***12-14	***18-20	**8	**10-12	8-10	12-14
Lambada (FG)	**8	**8-10	10-12	12-14	**8-10	**10-12	8-10	12-14	6	6-8	6-10	10-12
Mexicana (FG)	**8	**8-10	*10-12	*14-16	6-8	6-12	8-10	12-14	4-6	8-10	6-10	10-12
Pennisetum setaceum (Pk)	**24-30	**20-24	**to 48	**24-36	()	()	**( )	**( )	to 20	to 12	**to 40	**to 24
Pentas lanceolata 'Butterfly Blush' (Ball)	2-8	1-6	*10-13	*10-12	8	6	**14	**10	1-3	2-3	4-10	6
P. lanceolata 'Butterfly Cherry Red' (Ball)	6-8	4-6	*8-14	*10-12	6-8	4-6	8-14	8-12	1-4	2-3	2-3	2-3
P. lanceolata 'Butterfly Lavender Light'	2-3	3-4	6-10	6-12								
(Ball) P. lanceolata 'Butterfly Red' (Ball)	2-3	2-3	3-7	3-8								
P. lanceolata 'New Look Pink' (Ben)	2-3 2-4	2-3 2-4	3-7 4-7	3-8 4-8	4	6	6-8	6-8	1-2	1-2	2-4	2-4
Petunia hybrida - Floribunda class	2 7	2 7	- /	40	-	0	00	00	12	12	2 4	2 4
Celebrity Chiffon Morn (AAS '95)	6-8	8-12	10-12	15-18								
Double Madness Pink (Ball)	*8-10	*8-10	12-15	12-15	4-6	6-10	**17-14	**15-18	*6-10	*10-12	**12-14	**12-15
Double Madness Pink (John)	*8-10	*8-10	12-15	12-15	6	8-10	**12-14		*6-10	*8-12		**12-15
Double Madness Sheer Improved (Ball		*8-10	**10-12	**15-18	4-6	6-10	**10-12		8-10	8-10		**12-15
Madness Magenta (Ball)	8	8-10	12-14	12-15	4-6	6-10	**12	**15-18	**6-8		*12-14	
P. x hybrida - Grandiflora class												
Candypops Summertime (Gri)	8-10	10-12	**12-14	**18-20	2-4	4-6	**10-12	**20-24	**8	**10	**10-12	**12-14
Double Cascade Mix (PAS)	10-12	8-12	12-16	12-15	6-7	4-10	6-12	15-20	8-10	8-12	8-14	10-12
Double Cascade Orchid Mix (PAS)	*10-12	*10-12	**12-15	**12-15								
Double Cascade Plum Vein (Pk)	6-8	6-8	6-8	10-12								
Double Cascade Soft Pink (PAS)	6-8	8-12	12-14	12-15								
Dreams Mix - Waterfall (PAS)	*6-10	*8-12	12-16	12-15								
Dreams Mix - Wild Rose (PAS)	*10-12	*10-14	10-15	12-15	4-6	6-8	12-15	( )	8-10	10-12	12-14	12-15
Lavender Storm (GS)	6-8	8-12	**12-14	**18-20								
Pink Morn Storm (GS)	4-8	6-8	12-14	18-20								
Pink Storm (GS)	6-8	4-10	6-10	15-18								
Prism Sunshine (AAS '98)	8-10	10-12	12-16	18-20	2-6	4-6	**12-14	**18-20	**8-10	**10-12	**12-14	**12-15
Salmon Storm (GS)	4-6	6-10	10-12	15-24								
Petunia - Grandiflora (cont.) Ultra Limite	<sup>d</sup> *6-12"	*8-14"	12-15"	12-18"								
Edition Mix (GS) White Storm (GS)	**10_10	**10-12	**12-16	**18-20								
P. x hybrida Hedgiflora class	10-12	10-12	12-10	10-20								

	**0.42	****	**40.20	**20.	**< 0	****	**** 241	**/ \!!	** 4.0	**** - 241	**40.24	**/ \!!
Tidal Wave Cherry (Ball)		**18-24	**18-20	**30+	**6-8"		**to 24"	. ,			**18-24'	( )
Tidal Wave Hot Pink (Ball)		**20-24	**20-24	**24-30+	6-8	12-14	**to 24				**18-24	. ,
Tidal Wave Silver (PAS, AAS '02)	**15-18	**to 24	**18-20	**30+	4-6	14-16	**10-18	**( )	**10-12	**to 24	**18-24	**( )
P. x hybrida Milliflora class												
Fantasy Carmine (GS)	4-6	8-10	10-12	10-15								
Fantasy Crystal Light Salmon (GS)	3-6	3-8	10-12	12-14								
Fantasy Crystal Red (GS)	4-6	6-8	8-12	12-18								
Fantasy Ivory (GS)	2-6	2-8	6-8	12-14								
Fantasy Pink (GS)	3-6	4-8	8-10	12-15								
Fantasy Pink Morn (GS, AAS '96)	**6	**8-10	*8-10	*12-15								
Fantasy Red (GS)	3-6	4-6	6-8	10-12								
Fantasy Salmon (GS)	4-6	6-8	6-8	10-12								
P. x hybrida Multiflora class												
PrimeTime Blue (GS)	*6-12	*8-12	10-15	15-20								
PrimeTime Crystal Mix (GS)	4-12	6-12	15-17	15-18								
PrimeTime Fiesta Mix (GS)	6-12	6-12	**16-18	**18-24								
PrimeTime Lavender (GS)	*6-12	*8-12	**15-18	**20-24								
PrimeTime Light Blue (GS)	*6-12	*8-12	*8-10	*18-20								
PrimeTime Pink (GS)	**10-12	**12-14	15-18	20-24								
PrimeTime Pink Morn (GS)	**10-12	**12-14	15-18	20-24								
PrimeTime Rose (GS)	*8-10	*12-14	**10-12	**20-24								
PrimeTime Scarlet (GS)	8	10	12-14	12-15								
PrimeTime Twilight Mix (GS)	6-10	8-12	16-18	18-20								
P. x hybrida Prostrate or spreading clas	ss											
Avalanche Red (Pk)	4-6	4-10	6-8	8-15								
Avalanche Salmon (Pk)	4-6	6-12	6-10	15-20								
Giant Purple Surfinia (BCG)	4	12-14	**6-8	**26-30	2	8-12	2-4	to 24	2-4	8-14	**2-4	**to 24
Lavender Wave (PAS, AAS '02)	2-6	10-16	**6-8	**24+	**2-4	**12-16	**to 6	**( )	to 4	14-20	**to 10	**( )
Lime Surfinia (BCG)	2-6	2-12	6-8	20-24	**6	**12	**2-4	**to 36	2-6	12-14	**2-4	**to 24
Misty Lilac Wave (PAS)	6	12-14	**12-14	**24-26	**2-4	**16-20	**to 8	**( )	**to 6	**14-16	**to 10	**( )
Pink Wave (PAS)	**6	**12	6-8	20-24	4-6	12-16	**6-8	**( )	**to 6	**14-16	**to 10	**( )
Pink Wave Experimental 99wp5 (PAS)	2-6	4-12	4-6	20-24	4	16-20	**6-8	**( )	1-3	10-12	**to 8	**( )
Purple Wave (PAS, AAS '95)	**6-8	**12-14	**to 7	**to 24	***2-4	***16-20	) ***4-8	***( )	1-4	12-16	**4-6	**( )
Rambling Burgundy Chrome (GS)	3-8	8-16	**12-15	**22-24								
Rambling Shades O' Pink (GS)	3-8	8-16	**8-10	**24-26								
Rose Wave (PAS)	6	10-14	6-8	18-20	**4	**16-20	**to 12	**( )	**2-6	**14-16	**to 10	**( )
Trailing Purple (Gri)	**4-6	**12-14	6-8	20-24	**2-4	**16-20	**6-8	**( )	**2-3	**12-14	**to 6	**( )
Trailing Red (Gri)	6	6-10	6-8	15-20	4-8	10-12	**to 12	**to 24	2-6	8-14	**to 6	**( )
Phaseolus coccineus(Scarlet Runner Beau	n) <sub>**to 5'</sub>	**vining	**vining	**vining	12	12	**8-10'	**vining				
Scarlet Emperor" (		0		0						6	**0 40	****
Phlox cuspidata 'Crystal Mix' (Da) P. drummondii '21st Century Patriot Mix	2-4	1-3	3	5	2-6	2-4	3-6	4-8	4-6	6	**8-10	**10-12
(Ball)	2-4	4-6	4-6	2-6	2-6	1-6	3-8	4-8	*6-8	*6-10	*10-12	*12-14
P. drummondii 'Diamond Mix' (Da)	2-4	2-4	4-5	4-6	4-6	2-6	6	6	2-6	4-8	8-10	10-12
Portulaca grandiflora 'Margarita Rosita'	**4"	**8"	4-6"	10-12"	2"	3-6"	4-6"	10-12"	2"	3"	3"	5"
(AAS '01)	-	-										
P. grandiflora 'Sundial Peach' (AAS '99) Rudbeckia hirta 'Cherokee Sunset' (AAS	**3	**10-12	4-6	18	2	6-10	4	12-14	1-3	4-6	1-3	10-12
'02)	**15-20	**8-12	18-20	14-16	10-12	8-10	*18-24	*18-24	4-8	4-8	*18-20	*10-12
R. hirta 'Indian Summer' (AAS '95)	12-20	8-12	20-22	12-15								
R. hirta 'Sonora' (Ben)	**10-12	**6-8	8-12	8-10								
Salvia coccinea 'Snow Nymph' (Pk)	12-14	8-10	**22-24	**15-18								
S. farinacea 'Cirrus' (Pk)	6-8	6-10	**14-18	**12-18								
S. farinacea 'Reference' (Ben)	10-12	6-10	16-22	12-15								
S. splendens 'Firecracker Red' (Gri)	3-5	1-3	4-10	2-10								
S. splendens 'Salsa' series (GS)	3-10	1-6	4-15	2-12								
S. splendens 'Vista Mix' (PAS)	4-8	3-6	8-12	6-10	1-4	2-6	8-12	8-12	2-4	2-4	1-6	1-6
S. splendens 'Vista Red' (PAS)	2-6	2-6	6-12	6-12	2-6	2-6	8-12	8-12	2-6	2-4	2-3	3-4
									· -			

Sanvitalia speciosa 'Aztec Gold' (Ben)	4-10	6-8	6-9	10-12	4-6	6-10	4-6	12-14	4-8	3-6	*6-8	*8-14
Scabiosa atropurpurea 'QIS Scarlet' (Pk)	**18-20		20-28	10-12	4-0	0-10	4-0	12-14	4-0	3-0	0-8	0-14
S. atropurpurea 'Sweet Scabious Mix' (Pk)		**8-10	24-30	12-13								
Senecio cineraria 'Cirrus' (Pk)	4-6	6-8	24-30 8-10	8-12								
S. cineraria 'Silverdust' (Pk)	4-5	4-6	6-10	6-10								
Solanum sp. (Easter Egg Plant) (Pk)	15	4-0 12	20-22	15-18								
Stipa tenuissima 'Angel Hair' (Pk)	**20	**10	**20	**10-12	**12-14	**6-8	**20_25	**15-18	8-14	2-6	10-14	6-8
Tagetes erecta 'American Indian Yellow'					12-14	0-0	20-23	13-10	0-14	2-0	10-14	0-0
(Gri)	**16	**12	16-20	18-20								
T. erecta 'Antigua Gold' (GS)	**8-10	**8-10	**18-20	**18-20								
T. erecta 'Antigua Orange' (GS)	**10	**10	14-16	12-18								
T. erecta 'Antigua Primrose' (GS)	8-12	8-10	12-16	16-20								
T. erecta 'Antigua Yellow' (GS)	8-12	8-10	12-14	12-16								
T. erecta 'Discovery Orange' (Bod)	**10	**8	14-18	14-18								
T. erecta 'Discovery Yellow' (Bod)	*8-10	*8-10	**14	**14								
T. erecta 'Inca Gold' (GS)	**15	**12	20-24	22-26								
T. erecta 'Inca Orange' (GS)	**18	**12	**22-24	**22-24								
T. erecta 'Inca II Yellow' (GS)	**12	**12	14-18	12-14								
T. erecta 'Perfection Orange' (GS)	**16	**12	**22-24	**22-24								
T. erecta 'Perfection Yellow' (GS)	*18	*12	*18-24	*22-24								
T. patula 'Aurora Mix' (GS)	**8-10	**10	10-16	12-16								
T. patula 'Bonanza Bolero' (AAS '99)	**8-10	**8-10	**12-14	**12-14	6-8	10-12	8-14	10-18	4-6	4-6	**8-10	**8-10
T. patula 'Bonanza Gold' (PAS)	*6-10	*8-10	12-16	12-14	8	8-10	**12-15	**15-18	4-6	4-6	**8-12	**10-12
T. patula 'Bonanza Mix' (PAS)	8-12	8-12	*12-16	*10-14	6-8	6-10	12	14-16	4-6	4-6	8-10	6-10
T. patula 'Bonanza Orange' (PAS)	**10	**8-10	**16-20	**12-15	died		died		4-6	4-6	**10-12	**10-12
T. patula 'Hero Yellow' (Bod)	4-6	4-10	8-10	8-14			•		•			
T. patula 'Janie Gold' (WG)	6-8	6-10	8-12	12-16								
T. patula 'Janie Mix' (WG)	4-10	6-10	6-10	10-12								
T. patula 'Safari Yellow' (Bod)	8-10	8-10	**16-18	**13-15								
T. patula 'Troubadour Yellow' (WG)	4-10	6-10	14-16	14-16								
T. tenuifolia 'Luna Lemon Yellow' (Da)	8-12	12	14-16	16-18								
T. tenuifolia 'Starfire Mix' (Pk)	6-12	8-12	14-18	16-20								
Tanacetum ptarmiciflorum 'Silver Feather	.' 10-12	6-8	**12-14	**12								
(Pk) Thurbergia alata (Plack eved Suran									I.			
Thunbergia alata (Black-eyed Susan Vine)(Pk)	**to 36	**vining	**( )	**vining	6	8	died					
Thymophylla tenuiloba (Dahlberg	**8"	**12"	6-10"	14-18"					1			
Daisy)(Pk)	0	12	0-10	14-10								
Tithonia rotundifolia 'Fiesta del Sol' (AAS '00)	8-14	10-14	18-24	12-15	10-12"	8-12"	**18-24"	**15-20"	2-6"	2-4"	6-14"	8-12"
Trachelium caeruleum 'Devotion Blue'	8-12	c	9 10	<i>c</i> 0	12 14	<b>C</b> 0	15 10	10 12	0 1 2	16	*17 11	*6 10
(PAS)	8-12	6	8-10	6-8	12-14	6-8	15-18	10-12	8-12	4-6	*12-14	*6-12
T. caeruleum 'Devotion Purple' (PAS)	8-10	6	9-15	6-10	12-14	6-8	14-16	10-12	8-10	4-6	10-14	6-10
T. caeruleum 'Devotion White' (PAS)	6-12	4-6	10-14	6-10	6-10	6-8	18-20	12	2-8	2-6	10-16	8-12
T. caeruleum 'Passion in Violet' (Da)	6	6	8-10	6-8								
Tropaeolum majus 'Alaska' (Pk)	6-10	6-12	10-14	16-20								
T. majus 'Empress of India' (Pk)	12	10-12	12-18	15-18								
T. majus 'Jewel of Africa' (Pk)	8-12	10-12	12-16	14-18								
T. majus 'Moonlight' (Pk)	**12	**12-14	12-18	12-15								
T. majus 'Whirlybird Mix' (Pk)	**12	**12-14	14-18	14-18								
Verbena x hybrida 'Crystal Ball Mix' (PAS)	8-10	8-10	10-12	10-12								
V. x hybrida 'Novalis Deep Blue/White Eye' (Ben)	**8-10	**8-10	10-12	12								
V. x hybrida 'Quartz Blue' (PAS)	8	8-12	8-10	10-12	6	10-12	8-10	12-14	6-8	4-10	**6-8	**12-14
V. x hybrida 'Quartz Burgundy' (AAS '99)	8-10	6-8	8-10	10-12	4-8	6-12	6-8	12-14	1-6	3-8	6-8	10-14
V. x hybrida 'Quartz Formula Mix' (PAS)	8	8-10	10-12	10-12	4-6	8-12	6-8	10-15	2-4	3-6	4	6-12
V. x hybrida 'Quartz Red Eye' (PAS)	**8-10	**8-12	10-12	12-14	6-8	10-12	8-10	15-20	2-4	4-8	4	8-12
V. x hybrida 'Quartz Scarlet' (PAS)	**8-10	**8-12	10-12	10-12	6	8-10	6-8	10-12	4	2-8	4-6	10-14
V. x hybrida 'Quartz Waterfall Mix' (PAS)		**8-10	6-8	10-12	6	8-12	6-8	12-14	4	6-8	6-8	10-14
	0 10	0 10			5				•	5.0		

V. x hybrida 'Salmon Tapien' (BCG)	**4	**10-12	6	12-14	2	8-12	2-4	12-24	2	6-10	**4	**to 24
V. x hybrida 'White Temari' (BCG)	**4	**10-12	6	12-14	4	4-8	4	10-14	2-3	2-6	2-4	8-14
V. x speciosa (tenuisecta) 'Imagination' (AAS '93)	**to 6	**12	6-12	24+								
Viola wittrockiana 'Ultimo Morpho' (AAS '02)	rabbits a	te	rabbits ate	9	**8-10	**6-8	6-8	8-12	**8	**8	**12	**12
Wahlenbergia undulata 'Melton Bluebird' (Pk)	6-8	6	6-8	6-8								
Xeranthemum annuum (Immortelle) (Pk)	**12-14	**6-8	12-14	6-8								
Zinnia angustifolia 'Crystal White' (AAS '97)	*4-10	*4-10	**10-12	**10-12	**8	**8	9-14	12	2-6	4-6	7-9	10-12
Z. angustifolia 'Star Bright Mix' (Pk)	*6-14	*6-12	12	10-14								
Z. elegans 'Benary's Giant Mix' (Ben)	12-24	8-12	** to 30	**14-18								
Z. elegans 'Blue Point Formula Mix' (Ben)	20-24	10-12	up to 30	12-14								
Z. elegans 'Candy Stripe' (Pk)	to 24	8-12	to 24-30	10-12								
Z. elegans 'Park's Picks Mix' (Pk)	to 26	8-10	up to 30	15-18								
Z. elegans 'Peter Pan Mix' (GS)	6-12	8-12	12-15	12-14								
Z. elegans 'Short Stuff Mix' (GS)	6	6-8	6-8	8-12								
Z. hybrid 'Profusion Cherry' (AAS '99)	*8-12	*10-14	* 12-14	*12-14	8	8-10	*12-14	*14-16	4-6	3-6	10-12	12-14
Z. hybrid 'Profusion Orange' (AAS '99)	*6-10	*10-12	**10-14	**12-14	4-8	4-10	*12-18	*15-18	2-6	2-6	6-12	8-14
Z. hybrid 'Profusion White' (AAS '01)	6-10	6-10	*10-18	*15	4-8	4-6	*8-14	*12-14	3-6	2-4	6-8	8-10

Visual Observations

NDSU Bedding Plant Trials - 2001

	Fargo	Dickinson	Williston
Cultivar tested (seed source)	(July 18,19 and Aug 30 - Sept.11)	(July 11 and Aug. 24, 25)	(July 12 and Aug. 24)
Abelmoschus manihot 'Pink' (Pk)	Pink; Only 1 plant survived; nice little plant by Sept. but took too long to bloom	t Not Tested	Not Tested
Abutilon x hybridum	These grew the best in Fargo but the biggest drawback vigor in Williston.	was that the flowers hung down and were hard to see.	They did alright in Dickinson but were poor with little
Bella Apricot (PAS)	Pale, peachy orange; Did well although they lacked uniformity in size early in the season	Most floriferous of the four; good vigor and uniformity	Most vigorous of group here and best bloom but still not doing as well as Fargo or Dickinson
Bella Coral Deep (PAS)	Dark orange salmon; Had good vigor and bloom but weren't uniform in size	Not uniform in size or bloom; not as floriferous as 'Bella Apricot'	Not uniform in size or bloom all season
Bella Red (PAS)	Red; Same as previous with good bloom and vigor but not uniform in size	Uniform early but not later; good bloom	Least vigorous of the group here; not much bloom
Bella Salmon (PAS)	Deep coral; Most vigorous of the group but not uniform in size	Most vigorous of the four; not uniform in size but had good bloom.	Slow to bloom, not uniform in bloom time, not as vigorous as Fargo
Agastache cana 'Heather Queen' (Pk)	Rosy pink; Slow to bloom but healthy and was looking really nice by the end of the season	Not Tested	Not Tested
A. foeniculum 'Blue Spike' (Pk)	Dusty blue; Not uniform in bloom or size early; nice vigor by the second evaluation but past peak bloom	Not Tested	Not Tested
Ageratum houstonianum			
Azure Pearl (WG)	Blue; Uniform early, by the end of the season it wasn't as full or vigorous as some others	Not Tested	Not Tested
Blue Hawaii (Bod)	Blue; Did best early in the season; not uniform in size or bloom by the September evaluation	Not Tested	Not Tested
Blue Horizon (Pk)	Blue; Floriferous, showy and nice early but not quite as uniform or floriferous later in the season		Not Tested
Blue Lagoon (Pk)	Blue; Lacked uniformity in size all season but had good bloom, especially in September		Not Tested
Fields Blue (Nov)	Blue; Lacked uniformity in size all season but had good bloom	Not Tested	Not Tested
Hawaii Royal (Pk)	Purple; Not uniform in size all season; good bloom early but dead heads detracted from appearance by September	Not Tested	Not Tested
Hawaii Shell Pink (Pk)	Pale pink; Not uniform in size all season, bloom alright but lots of dead heads showing in September	Not Tested	Not Tested
Leilani Blue (GS)	Blue; Did alright all season but dead heads detracted later in the season	Not Tested	Not Tested
Neptune Blue (GS)	Blue; One of the more uniform cultivars early; not as ful vigorous or uniform as others by September	<sup>I,</sup> Not Tested	Not Tested
Silver Pearl (WG)	Creamy white; Dead heads much more noticeable on this cultivar all season	Not Tested	Not Tested
True Blue (Gri)	Blue; Good bloom on this one all season but lacked uniformity in size	Not Tested	Not Tested
Alstroemeria x hybrida	Slow to get established after transplanting; these did the middle of July.	e best at the Fargo location. They were also slow to bl	oom and many plants were still not blooming by the

Jazze Purple Rose (PAS)	Rosy mauve; Least vigorous of the three, slow to bloom and not as much bloom as others	Not blooming for first evaluation; poor bloom and vigor by the second evaluation	Low germination didn't test here
Jazze Rose Deep (PAS)	Deep mauve-yellow throat; Not uniform in size, bloom or vigor; most vigorous of the group	Poor germinationthese weren't tested here	Low germination didn't test here
Jazze Rose Frost (PAS)	Pink with yellow throat and white edge; Not uniform in size, bloom or vigor; pretty flowers	More vigor than 'Jazze Purple Rose'; not uniform in size and not much bloom	Not much vigor all season and few blooms
Amaranthus caudatus x A. hypochondriacus 'Magic Fountains' (Pk)	Looked weedy all season; color was dull, blooms were falling over	Not Tested	Not Tested
A. hypochondriacus 'Pigmy Torch' (Pk)	Also weedy looking; flowers were falling over and in the dirt and mud	Not rested	Not Tested
A. tricolor 'Aurora' (Pk)	Bright yellow with green; Nice early with good vigor and uniformity; dying by September - no vigor	Not Tested	Not Tested
A. tricolor 'Illumination' (Pk)	Red and green; Nice early with good coloration and vigor but not uniform, lost vigor and show by September	Not Tested	Not Tested
Ammi visagna 'Green Mist' (Pk)	White; Very nice early with good bloom and uniformity; flowers misshapen in Septbugs?	Not Tested	Not Tested
Ammobium alatum 'Bikini' (Pk)	White; Not uniform in size early but good bloom; declined by Sept. and half the plants were dead	Not Tested	Not Tested
Anagallis monellii 'Blue Light' (Pk)	Blue; Not much bloom all season but nice little plants; took frost very well	Not Tested	Not Tested
Antirrhinum majus (Snapdragons)	Did well but past peak bloom by Sept. evaluation - many dead heads evident up close	Not Tested	Not Tested
Chimes Mixture (GS)	Nice color mix; Good bloom early but not uniform; past peak bloom by September	Not Tested	Not Tested
Crimson Ribbon (GS)	Deep velvet red; Did well all season	Not Tested	Not Tested
Floral Showers (Pk)	Mix of colors; Good bloom early but past peak bloom by September	Not Tested	Not Tested
LaBella Mixture (GS)	Good color mix; Did alright all season	Not Tested	Not Tested
Lavender Ribbon (GS)	Lavender pink; Pretty color, not as vigorous or floriferous as a few other cultivars early, ok later	Not Tested	Not Tested
Light Pink Ribbon (GS)	Pink; Similar to Lavender Ribbon	Not Tested	Not Tested
Purple Ribbon (GS)	Deep magenta red; Very nice early with good bloom and uniformity; nice in September but not as floriferous	Not Tested	Not Tested
Rocket Mix (Pk)	Not as floriferous as LaBella mix, not as uniform as others; doing alright in September	Not Tested	Not Tested
Rose Ribbon (GS)	Deep coral rose; Not as floriferous as some but nice plants; nice in September with good color mass	Not Tested	Not Tested
White Ribbon (GS)	White; Not as vigorous as some others early; did alright by September evaluation	Not Tested	Not Tested
Yellow Ribbon (GS)	Yellow; Not as uniform as some others early; similar to other snaps in September	Not Tested	Not Tested
Arctotis venusta (Pk)	White with purplish cast; Very nice in July with good bloom and vigor; overrun by Artemisia annua later	Not Tested	Not Tested
Artemisia annua (Pk)	Very vigorous but no bloom all season;looked like a big weed	Not Tested	Not Tested

Asarina species	This genus is sometimes referred to as climbing or twinin 'Joan Lorraine' and 'Mystic Pink' were doing well at all th		an A. wislizensis in both Fargo and Dickinson. Both
Asarina scandens 'Joan Lorraine' (Pk)	Purple; Very vigorous all season but not too many flowers.	Not blooming by July evaluation but by August had good vigor and nice purple flowers	Just starting to vine in July with some purple flowers, doing well by August
A. scandens 'Mystic Pink' (Pk)	Pink; Not as vigorous as 'Joan Lorraine' but still did well; not many flowers all season		Not blooming by July evaluation, good vigor and bloom by August
A. x wislizensis 'Red Dragon' (Pk)	Not much vigor and didn't vine well; didn't see any flowers	Didn't do well here, no vigor and not much bloom	Not Tested
Asclepias curassavica 'Red Butterfly' (Pk)	Red; Not as vigorous as past years; also next to Artemisia annua which was huge and overtaking stuff around it	Not Tested	Not Tested
A. curassavica 'Silky Gold' (Pk)	Gold; Also not as vigorous or floriferous as in the past; next to Swiss chard which was overtaking it	Not Tested	Not Tested
Begonia x semperflorens-cultorum (Wax Begonia)	In Fargo, these were slow to establish but by late Augus there. And in Williston they did well all summer with both		Dickinson made a 100% improvement in performance
Alfa Mix (Da)	Mix of colors; Did alright all season	Not Tested	Not Tested
All Round Mix (Da)	Mix of colors; Healthy, uniform and floriferous all season.	Not Tested	Not Tested
Ambassador Mix (Da)	Not a good mix - mostly red; Uniform all season and floriferous into September	Not Tested	Not Tested
Ambassador Pink (Da)	Small with no vigor early; by second evaluation had good bloom and uniformity but was smaller than others	These plants were chlorotic in August although bloom and uniformity were good	One small plant otherwise good bloom, vigor and uniformity all season
Ambassador Rose (Da)	Not as vigorous as others and didn't bloom as well	Lacked uniformity in size all season but bloom was alright	Not as vigorous or uniform as others all season
Ambassador Rose Blush (Da)	Less vigorous than others and lacked uniformity in size	Low germinationdidn't test here	Low germination didn't test here
Ambassador Scarlet (Da)	Good bloom by second evaluation but not uniform in size	Low germinationdidn't test here	Low germination didn't test here
Ambassador White (Da)	Only 3 of 12 plants survived transplanting. Not uniform in size or bloom.	Low germinationdidn't test here	Low germination didn't test here
Dragon Wing Pink (PAS)	Low germinationdidn't grow well in greenhouse. Plants not vigorousdid poorly.	Low germinationdidn't test here	Low germination didn't test here
Inferno Mix (Da)	Uniform all season and floriferous into September but mostly pink flowers	Not Tested	Not Tested
Lotto Scarlet (Ben)	Small early but by September were vigorous, floriferous, uniform and very nice.	Not as floriferous as others but still nice plants	Not as floriferous or showy as some other cultivars but still did well
Lotto White (Ben)	Uniform, floriferous, vigorous all season	Most vigorous of all the begonias here during both evaluation timesnice!	Healthy plants but bloom wasn't as good as on some other cultivars
Olympia Sprint Red (Ben)	Lacked uniformity early but very nice laterfloriferous, uniform, showy, etc.	Vigorous, uniform and floriferous all season	Good bloom, color, uniformity and vigor all season
Olympia Sprint Rose (Ben)	Good bloom all season but lacking uniformity in size	Uniform, floriferous and vigorous early; by August not uniform in size but bloom good	Good bloom early but not as uniform as some others; by August very nice and showy
Olympia Sprint White (Ben)	Small early; by Sept. had good bloom, uniformity, and vigor	Vigorous, uniform and floriferous all season	Good bloom, uniformity and vigor all season
Party Red-Bronze Leaf (Ben)	Good bloom and vigor all season; nice show of red in September		Good vigor, bloom and uniformity early; by August not quite as full and dead heads more evident
Partyfun (Ben)	Good bloom and vigorous but not uniform in size, especially into September.	Not Tested	Not Tested

Queen Pink (Da)	Not as vigorous or floriferous as others all season	Lacked uniformity in size all season; bloom was alrigh	Pretty double flowers but not as full or floriferous as some other cultivars
Wax Begonia (cont.) Queen Red (Da	) Not as floriferous as others and not uniform in size or bloom	More uniform in size than 'Queen Pink'; nice vigorous plants in August with ok bloom	Low germination didn't test here
Queen White (Da)	Not as much bloom as others and not uniform in sizea few really small plants	Low germinationdidn't test here	Low germination didn't test here
Senator Mix (Da)	Good bloom, vigorous but not uniform in size, especially in September.	Not Tested	Not Tested
Senator Pink (Da)	Not as vigorous as others but bloom was good	Low germination didn't test here	Low germination didn't test here
Senator Red (Da)	Very nice by second evaluation with good bloom, uniformity and vigor	Lacked uniformity in size compared to others; bloom was alright	Good bloom all season but not as full or uniform as other cultivars
Senator Rose (Da)	Not as vigorous as others	Again, not uniform in size but bloom was good	Not as uniform as other cultivars but good bloom
Senator White (Da)	Lacking vigor early but was very nice by the end of the season	Low germination didn't test here	Low germination didn't test here
Super Olympia Pink (Ben)	Had good uniformity and bloom all season but plants were small	Uniform, vigorous and nice early; not as vigorous later out seemed like the irrigation water was missing this area	Uniform, floriferous, and vigorous all season
Super Olympia Red (Ben)	Good bloom, vigor, uniformity and show all season	Nice all season with good bloom, uniformity and vigor	Uniform, floriferous, and vigorous all season
Super Olympia Rose (Ben)	Uniform with good bloom early; not as floriferous later in the season	Uniform, floriferous, vigorous and showy all season	Same as the previous two
Super Olympia White (Ben)	Uniform with good bloom early; not as floriferous later but still uniform and vigorous	Not as uniform as others in July; better in August with good bloom, vigor and uniformity	Same as the previous three
Victory Bronze Leaf Mix (GS)	Uniform in size early but not later, bloom better in August than July	Not Tested	Not Tested
Victory Green Leaf Mix (GS)	Did alright, by August was vigorous with good bloom but not uniform in size	Not Tested	Not Tested
Vodka (Ben)	Red; Uniform, showy and nice all season	Uniform, floriferous, vigorous and showy all season	Also uniform, vigorous and floriferous all season
B. x tuberhybrida 'Fortune Mix' (Da)	Small with no vigor all season	Not Tested	Not Tested
B. x tuberhybrida 'Galaxy Mix' (Da)	No vigor and sickly all season	Not Tested	Not Tested
B. x tuberhybrida 'Pin Up Flame' (AAS '99)	Small with no vigor all season	Orange, yellow; Best it's ever done here, good vigor in August but not much bloom	Not uniform in size or bloom but did alright, had good bloom by August
Beta vulgaris var. cicla 'Bright Lights' (Pk)	Healthy and vigorous all season but colors not bright and many plants were just yellow and green	Not Tested	Not Tested
B. vulgaris 'Gourmet Burgundy' (Gri)	Deep red stalks, red veins; Not uniform in size but healthy and vigorous all season.	Not Tested	Not Tested
Bidens ferulifolia 'Golden Goddess' (Pk)	Golden; Nice early with fairly good uniformity and vigor; being overtaken by Swiss chard in September	Not Tested	Not Tested
Brassica oleracea 'Color Up Improved Mix' (Pk)	Did well all season; colored up especially well by September and October	Not Tested	Not Tested
B. oleracea 'Nagoya Mix' (Pk)	This cultivar has ruffled edges; also did well all season with the best color in the fall	Not Tested	Not Tested
B. oleracea 'Peacock Mix' (Pk)	The most uniform of the group; finely dissected leaves; very vigorous	Not Tested	Not Tested

Briza maxima (Quaking Grass) (Pk)		Vigorous and nice in July with lots of quaking seed heads, plants dead by August but seeds still on	Not Tested
Calendula officinalis 'Prince Mix' (Pk)	Golden vellow: Got overtaken by the kale later in the	Not Tested	Not Tested
C. officinalis 'Touch of Red Buff' (Pk)	Pale creamy yellow with dark edges; Did alright all season	Not Tested	Not Tested
Calibrachoa 'Trailing Orchid Pink' (BCG)		Poor with no vigor early; essentially dead by the August evaluation	Did the best at this location. Turned into a nice little ground cover by August although it wasn't uniform in spread.
Callistephus chinensis 'Florette Mix' (CG)	Not blooming by July evaluation; lots of dead heads by September although no Aster Yellows present	Not Tested	Not Tested
Capsicum annuum 'Chilly Chili' (PAS, AAS '02)		Not uniform in height, otherwise good show of peppers and color	Not as much vigor or uniformity as Fargo and Dickinson but getting lots of showy peppers
Catharanthus roseus (Vinca)	Slow to get established in Fargo but most were doing we August. The Williston plants lacked vigor and didn't do a	Il by the second evaluation in early September. In Dic swell as in Fargo or Dickinson.	kinson they did well all season but looked best in
Cooler Red (PAS)	Bright fuchsia red; Fairly uniform in size early but not bloom; uniform with good bloom by September	Not Tested	Not Tested
First Kiss Blush (Ben)		Not uniform early; nice in August with good vigor, bloom and uniformity	Did alright but nothing spectacular
First Kiss Coral (Ben)		Uniform early; nicest in August with good vigor, uniformity and bloom	Two plants died; others not very uniform or vigorous
First Kiss Polka Dot (Ben)	White with red eye; Not uniform in vigor early; good bloom later but not uniform in size	Best of the group in July; but nicer in August with good ploom, vigor, and uniformity	One of the better groups in Williston all season
First Kiss Ruby (Ben)		Small with no vigor early; vigorous, uniform, and floriferous by August	Uniform by August but not much bloom
Heat Wave Mix (Bod)	Mix of pinks; Not uniform in size or bloom all season; some plants yellowing by September	Not Tested	Not Tested
Jaio Scarlet Eye (AAS '02)		Alright in July, by August had good bloom but plants weren't uniform in size	Only two plants there, did alright
Mediterranean Mix (WG)	Mix of white, lavender, pink, fuchsia; Most vigorous of the vinca in July, not uniform in size later	Not Tested	Not Tested
Merlot Mix (Ball)	Not uniform in size early; good bloom all season but not much of a color mix	Not much of a color mix but plants were uniform and floriferous by August	No vigor early; not uniform in size later
Pacifica Coral (WG)	Deep, bright coral; Not uniform in bloom early; better bloom in Sept. but not uniform in size.	Not Tested	Not Tested
Pacifica Mix Improved (WG)	Slow to bloom; not uniform in size by the end of the season but bloom was ok.	Not Tested	Not Tested
Pacifica Peach (WG)	September had good uniformity and bloom	Not Tested	Not Tested
Stardust Orchid (AAS '00)	Fuchsia lavender with white eye; Did alright but there was some yellowing of plants by September	Not as vigorous as others early, uniform by August bu bloom not as good as other vinca	t Did alright but didn't have much bloom
Sunsplash Cherry (Gri)		Not uniform in size all season; had better bloom in August; bright color	Did alright but was better in Dickinson and Fargo
Sunsplash Lilac (Gri)	Lavender; Color was dull; not as uniform or floriferous as others throughout the season	Also not uniform in size; good bloom but color was du	IOnly 2/6 survived; Dull color and no vigor
Trailing Lilac (WG)	Solid fuchsia-lavender; Did alright all season	Not Tested	Not Tested
Trailing White (WG)	Solid white; Did alright all season	Not Tested	Not Tested

Tutti Frutti Mix (Ball)	Good bloom but not uniform in size between colors	Not uniform in size but good bloom	One of the better groups in August; bloom was good
Celosia cristata		1	,
Amigo Mahogany Red (Ben)	Deep burgundy leaves; Not much vigor all season	Not Tested	Not Tested
Amigo Mix (Ben)	Sickly with no vigor and not much bloom all season	Not Tested	Not Tested
Colours Pink (Gri)	No vigor or uniformity all seasonyellowing and sickly toward the end of the season	Pretty flower but was never very vigorous	Was nicer in Dickinson; not much vigor or bloom here
Prestige Scarlet (AAS '97)	Not uniform in size or bloom early; by September were	Nice in July but by August had outstanding uniformity, bloom and vigor - very nice	v, Not too impressive in July but by August had good bloom although not uniform in size
Celosia plumosa			
Castle Mix (AT)	Mix of colors; sickly and not much vigor or uniformity all season	Not Tested	Not Tested
Castle Orange (AT)	Not much vigor all season: flowers were a dull 'dirty'	Not Tested	Not Tested
Gloria Mix (Ben)	Nice mix of colors but sickly and no vigor all season	Not Tested	Not Tested
New Look (Ben)	Burgundy leaves and flowers; Did alright early but was especially showy by the end of the season.	Not Tested	Not Tested
Celosia spicata			
Flamingo Feather (Bur)	Not uniform in size early but good bloom; better bloom in September but not as full as 'Purple Flamingo'	Not Tested	Not Tested
Pink Candle (Pk)	Nice bloom but color washed out in July; nice in September but not as full as 'Purple Flamingo'	Not Tested	Not Tested
Purple Flamingo (Pk)	Very healthy but not blooming in July; by September plants were floriferous and showy	Not Tested	Not Tested
Centaurea cyanis 'Dwarf Midget Mix' (Pk)	x' Not very impressive, not uniform in bloom or size all season	Not Tested	Not Tested
C. cyanis 'Frosted Queen Mix' (CK)	plant; failing over by September but bloom ok		Not Tested
C. cyanis 'Garnet' (Pk)	Deep burgundy-almost black; Not uniform in size early; ok in September but falling over	Not Tested	Not Tested
Cerinthe major var. purpurescens 'Kiwi Blue' (Pk)	Blue flowers, blue green foliage; Fairly uniform early with good coloring; still doing well in September	Not Tested	Not Tested
Chrysanthemum carinatum 'Merry Mix' (Pk)	Not uniform in size all season; one sickly plant that was yellowing by September	Not Tested	Not Tested
C. vulgare 'Gold Sticks' (Pk)	Vigorous with lots of gold "balls" and ferny foliage; still healthy and floriferous into September	Not Tested	Not Tested
Cladanthus arabicus 'Criss-Cross' (Pk)	Not uniform in size early but good bloom and nice color contrast between yellow flowers and grayish foliage	r Not Tested	Not Tested
Cleome hasslerana 'Mix' (Pk)	Not uniform in size or bloom all season; not as full or vigorous as 'Sparkler Blush' in September	Not Tested	Not Tested
C. hasslerana 'Sparkler Blush' (AAS '02)	S Healthy vigorous and uniform in July: still good vigor	Not Tested	Not Tested

C. serrulata 'Solo' (Pk)	Pale pinkish white flowers; Good bloom early; declining by September and falling over	Not Tested	Not Tested
Cosmos bipinnatus 'Early Wonder' (Pk)	White, lavender; Not uniform in size or bloom early; declining and falling over by September	Not Tested	Not Tested
C. bipinnatus 'Psyche Mix' (Pk)	Pinks, lavenders; Not uniform in size and falling over early; by Sept. was declining and falling over	Not Tested	Not Tested
C. sulfureus 'Bright Lights' (Pk)	Orange; Good bloom early but declining like other cosmos in September and falling over.	Not Tested	Not Tested
C. sulfureus 'Cosmic Orange' (AAS '00, Ben)		Good bloom and uniformity in July; declining some in bloom by August	Did alright; had good bloom but wasn't uniform in size
C. sulfureus 'Cosmic Yellow' (Ben)	Yellow; Smaller than 'Cosmic Orange', not uniform in size or bloom early, declining like others in Sept.	Not Tested	Not Tested
C. sulfureus 'Ladybird Mix' (Pk)	Yellow, orange, rusts; Good bloom early but dead heads detracted, declined in September	Not Tested	Not Tested
Cuphea hyssopifolia 'Allyson' (Pk)	Purple; Good uniformity early, unique looking, by September was nice-not too showy but interesting	Not Tested	Not Tested
C. purpurea 'Firefly' (Pk)	Red; Good vigor, uniformity and show all season	Not Tested	Not Tested
Dahlia hybrids			
Bishop's Children (Pk)	Not blooming by July or uniform in size; by September, plants vigorous but not much bloom	Not Tested	Not Tested
Diablo Mix (Pk)	Mix of colors; Barely blooming by July evaluation, looked nice by September	Not Tested	Not Tested
Double Pompon Mix (Pk)	Mix of colors; Most vigorous of group in July, still nice in September with ok bloom	Not Tested	Not Tested
Garden Pride (Ben)	Not uniform in bloom, size or vigor in July, vigorous in September but bloom could've been better	Not Tested	Not Tested
Redskin (WG)	Maroon, bronze; Not much bloom by July, doing alright by September	Not Tested	Not Tested
Dianthus chinensis			
Diamond Blush Pink (Pk)	White to dark pink; Good bloom early, not uniform in vigor, by Sept. good bloom, not uniform in size	Not Tested	Not Tested
First Love (Ball)		Good bloom and uniformity in July; by August had declined in bloom and lost some uniformity	Did alright but wasn't as uniform or floriferous as 'Melody Pink'
Melody Pink (AAS '00)		Nice in July with fairly good bloom and uniformity, bloom declined by August but vigorous, uniform	Did well here with good bloom and vigor
Super Parfait Raspberry (Pk)	Not very vigorous or showy all season	Not Tested	Not Tested
Valentine (PAS)	Not uniform in size or bloom early, small but uniform in September, not much bloom	Not Tested	Not Tested
Velvet 'N Lace (Pk)	Deep burgundy with white; Not uniform in bloom or vigor in July, by Sept. uniform in size, not many flowers	Not Tested	Not Tested
Diascia barberae 'Pink Queen' (Pk)	Pink; Healthy but small early, nice little plants in September but falling over due to wind	Not Tested	Not Tested
	Orange; Weedy looking all season, not much bloom left		

Eustoma grandiflorum (Lisianthus)

Echo Max (Pk)         Prick, white, purple, Good uniformity and bloom advy, not a sumform is Sep bot More madvy, Proference (Pk)         Not Tested         Not Tested           Echo Pink (Pk)         Solt pink, Not as uniform is Echo Mix in Udy but proference (Pk)         Not Tested         Not Tested         Not Tested           Echo Pink Pooteer (Pk)         Whet well hight pink dogs. Not uniform in Size or Vge proference (Pk)         Not Tested         Not Tested         Not Tested           Portex: Note in Dicting or not uniform in Size or Vge proference (Pk)         Purple: Note in Dicting or not uniform in Size or Vge proference (Pk)         Not Tested         Not Tested           Heid Hydrid (Pk)         Coor mix: Note al Indigation and season: before the them than Pare Size (Pk)         Not Tested         Not Tested           Lizzy Blue (SS)         Purple: Note in Dicting or proference (Pk)         Not Tested         Not Tested           Not Tested         Not Tested         Not Tested         Not Tested           Lizzy Blue (SS)         Pink: Sinitar to Lizzy Blue         Not Tested         Not Tested         Not Tested           Rod Glass (Pk)         Deep or dpink: Not al worg or as Echo Series, Ly Rod Glass (Pk)         Not Tested         Not Tested         Not Tested           Rod Glass (Pk)         Deep or dpink: Not al worg or as Echo Series, Ly Rod Glass (Pk)         Not Tested         Not Tested         Not Tested				1 1
Each Pink (Pin)Bloom nice, by Sept. falling over, not uniform in bloomNot restedNot restedEcho Pink Picotee (Pk)Wilter Wilt gift high rink odges: Not uniform in bloomNot TestedNot TestedForever Blue (PAS, AAS 10)Purples, Nace in Dickinson: on uniform in size or special data in the season; better here than PargoNot TestedNot TestedHeid Hybrid (Pk)Color mic, Not an Indiremus as Echo Mich of still mice, on testedNot TestedNot TestedNot TestedLizzy Blue (GS)Purples, Nece in diffing from windNot TestedNot TestedNot TestedLizzy Blue (GS)Pink: Smillar to Lizzy Blue'Not TestedNot TestedNot TestedLizzy White (GS)Pink: Smillar to Lizzy Blue'Not TestedNot TestedNot TestedRed Glass (Pk)Deep red pink: Not as vigorous as "Echo' series, by September not many blooms and no vigorNot TestedNot TestedNot TestedFr. Bereice Solor' (Bat)Same as for Bern Basket'July had more vigor than Bernies Galor'b but esh both evaluation times.Similar to TestedFr. Bereice Solor' (Bat)Same as for Bern Basket'July had more vigor than TestedNot TestedGallardia purbellar Veri New Ym nice and showy by SeptemberNot TestedNot TestedGallardia purbellar Veri New Ym nice and showy by SeptemberNot TestedNot TestedMich (GS)Mich (Since Transphilter)Not TestedNot TestedNot (GS)Same as for Bern Basket'July had more vigor than ball beat but healthy later-not much bloomGallardia purbellar Veri New Nick (RS)	Echo Mix (Pk)	Pink, white, purple; Good uniformity and bloom early, not as uniform in Sept. but bloom still nice	Not Tested	Not Tested
Echol Pith Police (Ph)vigor early, by September not much bloomNot TestedNot TestedForever Blue (PAS, AAS 01)Purplex: Not million in Dicklanson, not uniform in size or the SeptemberHad godd bloom all season: lacked uniformity in spread later in the season: better here than Fargo operation and season lacked uniformity in spread later in the season: better here than Fargo Not TestedNot TestedNot TestedHeid Hybrid (Pk)Color mi: Not and formit us or cone really nife plant but two that exert sickly and yellowNot TestedNot TestedNot TestedLizzy Plank (GS)Purple: Not uniform in vigor or boom all season much bloom all seasonNot TestedNot TestedNot TestedLizzy White (GS)White: Ket dying-only one healthy plant early, not much bloom all seasonNot TestedNot TestedNot TestedRed Glass (Pk)Deep red pink; Not a wigorous as "Echo" series, by September not many blooms and no vigorNot TestedNot TestedNot TestedF. Berries Galore (Batt)Same as for Berri Basket'Ind wigor early: smill but healthy later-not much bloomNot TestedNot TestedG. Juchela Yellow Sun' (Pk)Mix o colors: Not uniform in size or you much bloom god on vary nice by the end of the seasonNot TestedNot TestedG. Juchela Yellow Sun' (Pk)Mix o colors: Not uniform in size early, did alight but not way nice by the end of the seasonNot TestedNot TestedG. Juchela Yellow Sun' (Pk)Mix o colors: Not uniform in size early, did alight but not way nice by the end of the seasonNot TestedNot TestedGallardid pulchella Yellow Sun	Echo Pink (Pk)		Not Tested	Not Tested
Provent Bute (PAS, KAS OT)early vigorous plants with good bloom by September good bloom in Sept. but falling from windpread later in the season; better here than Fargo Not Testedwere sickly and yellowHeidt Hybrid (Pk)Golor micr, Not as fortforeus as Erbo Mix but still nice, good bloom in Sept. but falling from windNot TestedNot TestedNot TestedLizzy Pink (OS)Pink: Similar to Lizzy Blue'Not TestedNot TestedNot TestedNot TestedLizzy Vinie (GS)White; Most dying-only one healthy plant early, not much bloom all seasonNot TestedNot TestedNot TestedRed Glass (Pk)Deep red pink: Not as vigorous as Echo' series, by September not many blooms and ovigorNot TestedNot TestedNot TestedFragaria (Strawberry) Beri Basket'These did better in Dickinson and Willison; here thy lacked vigor and dicht bloom as wellNot TestedNot TestedNot TestedF. Berries Galore' (Ball)Same as for Berri Basket'Same as for Berri Basket'Same as for Berri Basket'Similar to Berri Basket'Fuefsia Snowfire Angel Earlings' (GC)Poor with no vigor or much bloom all seasonNot TestedNot TestedNot TestedGazaniar igensTalent Orange (Ben)Mix of colors; Not unform in size early, did alright but vary loce by the end of the season?Not TestedNot TestedJayle were indicated form in bloom early, still vigorous of fortforeux of for	Echo Pink Picotee (Pk)		Not Tested	Not Tested
Heidi Hybrid (Pk)       Color mic, Not as florfferous as "Ech Mikh but still into; good bloom in sept. but falling from wind good bloom in sept. but falling from wind       Not Tested       Not Tested         Lizzy Blue (CS)       Purple; Not uniform in vigor or bloom all season       Not Tested       Not Tested         Lizzy Write (GS)       Write; Most dying-only one healthy plant early, not much bloom all season       Not Tested       Not Tested       Not Tested         Red Glass (Pk)       Deep red plink; Not as dyorous as Echo' series, by September not many blooms and no vigor       Not Tested       Not Tested       Not Tested         Fragrain (Strawberry) Berri Basket (Gall)       These did beard willow and Millitors, Not as floriferous as well       Not Tested       Not Tested       Note Htel plants with lots of blooms and berries at bloom         Fragrain (Strawberry) Berri Basket (Gall)       Same as for Berri Basket'       Not Tested       Similar to 'Berri Basket'         Fuchsia Showfire Angel Earring (FCG)       Poor with no vigor or much bloom all season       Not Tested       Not Tested       Not Tested         Gallardia publela 'Red Plume' (As Colors; Stra uniform in size adv), by September       Not Tested       Not Tested       Not Tested         Gallardia publela 'Red Plume' (As a vigorous or floriferous as other gazania in colors; Sor tu niform in size adv), bot not uniform in size adv), bot on turiform in size adv), bot on turiform in size adv), for tested       Not Tested       Not Tested<	Forever Blue (PAS, AAS '01)			
Lizzy Pink (GS)Pink; Similar to Lizzy Bue'Not TestedNot TestedLizzy White (GS)White: Most dying-only one healthy plant early, not much bloom all seasonNot TestedNot TestedRed Glass (Pk)Deep red pink; Not as vigorous as Echo' series, by September not many blooms and no vigorNot TestedNot TestedFragaria (Strawberry) Beri Basket'These did beter in Dickinson and Williston; here they lacked vigor and didh bloom as wellNot TestedNice little plants with lots of blooms and berries at boling or and didh bloom as wellF. Berries Galore' (Ball)Same as for 'Berri Basket'These did beter in Dickinson and Williston; here they lacked vigor and didh bloom as wellNice little plants with lots of blooms and berries at boling or and didh bloom as wellF. Berries Galore' (Ball)Same as for 'Berri Basket'Same as for 'Berri Basket'Similar to 'Berri Basket'Fuchsia 'Snowfire Angel Earrings' (GCG)Poor with no vigor or much bloom all season July, very nice and showy by SeptemberNot TestedNot TestedGallardia pulchella 'Red Plume', Kont 'S millar to 'Red Plume', slow to start but yn tice by the end of the seasonNot TestedNot TestedGazania rigensMix of colors: Not uniform in size early, did alright but others did well all seasonNot TestedNot TestedKiss Mix (GS)Mix of colors: So to 2 plants die difter transplanting but others did well all seasonNot TestedNot TestedTalent Orange (Ben)Nice plants early that in uniform in size by September oton good but not uniform in bloomNot TestedNot uniform in size on yoous but not uniform	Heidi Hybrid (Pk)		Not Tested	
Lizzy White (GS)White: Most dying-only one healthy plant early, not much bloom all seasonNot TestedNot TestedRed Glass (Pk)Deep red pink; Not as vigorous as "Echo' sories, by September not many blooms and no vigorNot TestedNot TestedFragaria (Strawberry) Beri Basket'These did better in Dickinson and Williston; here they lacked vigor and dich bloom as welln. July had more vigor than 'Berries Galore' but less tils per plant; still nice in AugustNot TestedF. Barries Galore' (Ball)Same as for 'Berri Basket'n. July had more vigor than 'Berries Galore' but less is per plant; still nice in AugustSimilar to 'Berri Basket'F. Barries Galore' (Ball)Same as for 'Berri Basket'Door with no vigor or much bloom all season July, very nice and showy by SeptemberLacking vigor early; small but healthy later-not much hoorGallardia pulchella 'Red Plume' (AAS Red and orange flowers; Just starting to bloom good in 91)Door with no vigor or much bloom all seasonLacking vigor early; small but healthy later-not much hoorGazania rigensMix of colors; Not uniform in size early, did alright but others did well all seasonNot TestedNot TestedBaybreak Mix (Pk)Mix of colors; Sont 1 plants died after transplanting but others did well all seasonNot TestedNot TestedTalent Orange (Ben)Nice jamits early but not uniform in size by September on good but not uniform in size or bloom segtember but not as forliferous as other gazania all sessonGood Informity were vigorous but not blooming much for eliver evaluationTalent White (Ben)Not a vigorus or thoriferous segtemberNot a vigorus o	Lizzy Blue (GS)	Purple; Not uniform in vigor or bloom all season	Not Tested	Not Tested
L22 writie (US)     much bloom all season     Not Tested     Not Tested       Red Glass (Pk)     Deep red pink: Not as vigorous as Echo' series, by September not many blooms and no vigor     Not Tested     Not Tested       Fragaria (Strawbery) Berri Basket (Ball)     These did better in Dickinson and Williston; here the lacked vigor and dirft bloom as well     Not Tested     Not Tested       F. Berries Galore' (Ball)     Same as for Berri Basket     Drift mit boom as well     Similar to Berri Basket     Similar to Berri Basket       Fuchsia 'Snowfire Angel Earrings' (BCG)     Poor with no vigor or much bloom all season (BCG)     Door with no vigor or much bloom all season (BCG)     Not Tested     Not Tested       G. pulchella 'Kell New Sun' (Pk)     Golden yellow; Similar to 'Red Plume', slow to start but very nice by the end of the season     Not Tested     Not Tested       Daybreak Mix (Pk)     Mix of colors; S of 12 plants died after transplanting but very nice by the end of the season     Not Tested     Not Tested       Talent Orange (Ben)     Nice Ittle plants with good bloom early; still vigorus but not ming ni size; by September valuation time     Not uniform in size early; not a lot of bloom at either valuation time       Talent White (Ben)     Nice Ittle plants with good bloom early; still vigorus but not blooming much for either evaluation blooming much for either evaluation     Not vigor, not many blooms all season       Talent Yellow (Ben)     Not uniform in bizer othoreus witorigoremethy     Not mether     Same as other ga	Lizzy Pink (GS)	Pink; Similar to 'Lizzy Blue'	Not Tested	Not Tested
Red Glass (PK)September not many blooms and no vigorNot TestedNot TestedNot TestedFragaria (Strawberry) 'Berri Basket'These did better in Dickinson and Williston; here thy lacked vigor and didn' bloom as wellIn July had more vigor than "Berries Galore' but less mults per plant; still nice in August truts per plant; still nice in AugustSimilar to 'Berri Basket'F. Berries Galore' (Ball)Same as for 'Berri Basket'Similar to 'Berri Basket'Similar to 'Berri Basket'Fuchsia 'Snowfire Angel Earrings' (BCG)Poor with no vigor or much bloom all season diding vigor early; small but healthy laternot much bloomNot TestedGallardia pulchella 'Red Plume' (AAS Red and orange flowers; Just starting to bloom good in yery nice and showy by September der yery nice by the end of the seasonNot TestedNot TestedGalardia pulchella 'Yellow Sun' (Pk)Mix of colons; Not uniform in size early, did alright but not much variation in colorsNot TestedNot TestedMix of colons; Not uniform in size early, did alright but not much variation in colorsNot TestedNot TestedNot TestedNot restedMix of colons; Not uniform in size early, did alright but others did well all seasonNot TestedNot TestedTalent Orange (Ben)Nice finite plants with good bloom early; still vigorous and seasonNot uniform in size; by September valuation timeNot inform in size early; not a lot of bloom at either valuation timeTalent White (Ben)Nice litte plants with good bloom early; not uniform in size or bloom september to not as forflerous as other gazaniaSod uniformi in size or bloom and vigorus ea	Lizzy White (GS)		Not Tested	Not Tested
(Bail)       Iacked vigor and didn't bloom as well       ruits per plant; still nice in August       both evaluation times.         F. Berries Galore (Ball)       Same as for Berri Basket'       Uniform with good flower and fruit production all season       Similar to 'Berri Basket'         Fuchsia 'Snowfire Angel Earrings'       Poor with no vigor or much bloom all season       Lacking vigor early; small but healthy laternot much bloom       Nice little plants all season but not much bloom         Gaillardia pulchella 'Red Plume' (AAS Red and orange flowers; Just starting to bloom good in '91)       Not Tested       Not Tested       Not Tested         G. pulchella 'Yellow Sun' (Pk)       Mix of colors; Not uniform in size early, did alright but not much variation in colors       Not Tested       Not Tested       Not Tested         Gazania rigens       Mix of colors; Not uniform in size early, did alright but not uniform in size early, did alright but not uniform in size, by September ot others did well all season       Not Tested       Not Tested       Not Tested         Talent Orange (Ben)       Nice plants early but not uniform in size or by September deseason       Sod uniformity except for one very small plant; not blooming much for either evaluation       No vigor, not many blooms all season         Talent White (Ben)       Nice little plants with good bloom early; still vigorous by September were evaluated       Not methor mitorin in bloom       Same as other gazania         Gomphrena globosa 'Gnome' (Pk)       Rose; Slow to bloo	Red Glass (Pk)		Not Tested	Not Tested
Pr. Bernes Gabre (Bail)       Same as for bern basket       season       Similar to bern basket         Fuchsia 'Snowfire Angel Earrings'       Poor with no vigor or much bloom all season       Lacking vigor early; small but healthy laternot much       Nice little plants all season but not much bloom         Gaillardia pulchella 'Red Plume' (AAS Red and orange flowers; Just starting to bloom good in July, very nice and showy by September       Not Tested       Not Tested         G. pulchella 'Yellow Sun' (Pk)       Golden yellow; Similar to 'Red Plume', slow to start but very nice by the end of the season       Not Tested       Not Tested         Gazania rigens       Mix of colors; S of 12 plants died after transplanting but not uniform in size early, did alright but no trans did well all season       Not Tested       Not Tested         Talent Orange (Ben)       Nice plants early but not uniform in bloom       Sogon and not many blooms all season       Sodou niformity except for one very small plant; not bloom ing much evaluation time beom and vigorous but not blooming much evaluation       No vigor, not many blooms all season         Talent White (Ben)       Nice little plants with good bloom early; still vigorous by September       Sod on informity except for one very small plant; not blooming much either waluation time they were evaluated       Same as other gazania         Talent White (Ben)       Nice little plants with good bloom early; still vigorous by September but not as forferous       Not uniform in size or bloom in size or bloom       Same as other gazania	<b>a</b>			•
(BCG)       Pool with hours of our hour hours of our hour hour hour hour hour hour hour	F. 'Berries Galore' (Ball)	Same as for 'Berri Basket'	<b>o</b> 1	Similar to 'Berri Basket'
'91)       July, very nice and showy by September       Not Tested       Not Tested         G. pulchella 'Yellow Sun' (Pk)       Golden yellow; Similar to 'Red Plume', slow to start but very nice by the end of the season       Not Tested       Not Tested         Gazania rigens       Mix of colors; Not uniform in size early, did alright but not much variation in colors       Not Tested       Not Tested         Daybreak Mix (Pk)       Mix of colors; 5 of 12 plants died after transplanting but ottens did well all season       Not Tested       Not Tested         Talent Orange (Ben)       Nice plants early but not uniform in bloom       Not as vigorous or floriferous as other gazania all season       Godd uniformity except for one very small plant; not blooming much for either evaluation       No vigor, not many blooms all season         Talent Rose Shades (Ben)       Nice little plants with good bloom early; still vigorous by September but not as floriferous       Uniform in size or bloom all season       Same as other gazania         Talent Yellow (Ben)       Not uniform in bloom early; not uniform in size or bloom by September wery nice with good bloom, uniformity and vigor       Not uniform in size or bloom all season       Same as other gazania         Not uniform in diogrous searty but not uniform in height, still       Not Tested       Not Tested       Not vigor, not many blooms all season         Talent Rose Shades (Ben)       Nice little plants with good bloom early; still vigorous by September       Not uniform in size or bloom all s	• •	Poor with no vigor or much bloom all season		Nice little plants all season but not much bloom
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Talent Yellow (Ben)       by September       Not Uniform in size or bloom all season       Same as other gazania         Gomphrena globosa 'Gnome' (Pk)       Rose; Slow to bloom, by September very nice with good bloom, uniformity and vigor       Not Tested       Not Tested         G globosa 'Mix' (Pk)       Full and vigorous early but not uniform in height, still       Not Tested       Not Tested	Talent White (Ben)			Same as other gazania
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	Gomphrena globosa 'Gnome' (Pk)		Not Tested	Not Tested
	G. globosa 'Mix' (Pk)		Not Tested	Not Tested

G. haageana 'Strawberry Fields' (Pk)	Red; Not as vigorous as previous two in July but very nice in September with good uniformity, bloom, etc.	Not Tested	Not Tested
Gypsophila muralis 'Garden Bride' (Da)	Pale pink, single blossoms; Good vigor and bloom early; decline in bloom later in the season	Uniform and vigorous early with lots of blooms; doing alright in August but lots of unopened buds	Not blooming well either evaluation time although plants were full of buds
G. muralis 'Gypsy' (Da, AAS '97))	Pale pink, double blossoms; Very nice early with good bloom and vigor; decline in bloom later	Not uniform in size and not as floriferous as 'Garden Bride'	Nice plants early with good bloom; black beetles in August seemed to be eating flowers
Helianthus annuus	The sunflower did poorly at all three locations although i and seem to be a little more high maintenance than som		to a lot of insect and disease problems in North Dakota
Chianti (Ball)	Lots of blooms and sunflower beetles early; falling over and declining by late August	Most vigorous sunflower early with good bloom; decline in bloom later and scraggly plants	Not blooming in July and by August they were falling over
Dorado (Ball)	Misshapen flowers (bugs?); no vigor and dying by late August	Heads shriveled (bugs?); not many blooms	Not much bloom in July; dying by August
Lemon Eclair (Ball)	Least vigorous of the group early; dead by September	Not uniform in size or bloom; typical sunflower head incorrectly labeled?	Pretty spider flower early; dying by August
Ring of Fire (Ben, AAS '01)	Did poorly with many bugs and diseases	Doing well early but by August some insect was chewing on the heads and deforming them	Not blooming in July but uniform; by August was one of the better sunflowers but was buggy
Soraya (AAS '00)	Some plants doing alright during July evaluation but by September had many bugs and diseases	Not blooming in July, typical of the other sunflowers in August	Not blooming in July, by August was alright but was buggy
Starburst Aura (Ball)	No vigor and dead by September	Nice flowers early; decline in bloom by August	Pretty flower early; dying by August
Sundown (Ball)	Best of the group in July with fairly good vigor and fewer bugs than others; dead by September	Couldn't findlost from late frost?	Not uniform in bloom early; dying by August
Helichrysum bracteatum 'Bikini Mix' (JSS)	Mix of colors; Uniform in size but not bloom early, by September good bloom-needed deadheading	Not Tested	Not Tested
H. bracteatum 'Fiery Mix' (Pk)	White, bronze; Nice bloom but weedy looking	Not Tested	Not Tested
H. monstrosum 'Mix' (Pk)	Mix of colors; Same as previous - nice bloom but weedy looking	Not Tested	Not Tested
Hypoestes phyllostachya 'Confetti Mix' (Da)	Lacking uniformity in size but color variation of leaves is nice	Not Tested	Not Tested
Impatiens balsamina 'Carambole Mix (Pk)	' Mix of colors; Not very vigorous or uniform, needed more water?	Not Tested	Not Tested
Impatiens hawkerii (New Guinea Impatiens)		Not Tested	Not Tested
Harmony Raspberry Cream (FG)	Salmon - some white around eye; No vigor and not much bloom all season	Uniform, nice color and good bloom early; Not blooming in August and two dead plants	Uniform and floriferous early, not as floriferous later
Harmony White (FG)	Best of the group in Fargo; uniform but small	Alright early but lacking uniformity in size and not blooming in August	Good bloom all season, lacked uniformity early but good later, showy
Java Cherry Rose (PAS)	Deep red-pink; Not uniform in size, bloom or vigor all season.	Didn't have much bloom for either evaluation; not uniform in size	Did alright but not as full as some others
Java Orange (PAS)	Salmony-orange; Small with no vigor and not much bloom all season.	Most vigorous of the three 'Java' impatiens early; not much bloom or uniformity later	Not as vigorous as others; only 2 of 6 plants alive
Java Pearl (PAS)	Small with no vigor and not much bloom all season.	Only 3 of 6 plants alive at first evaluation; not much vigor and few blooms	Not uniform in size or bloom early; not as vigorous as some others in August
Sonic Amethyst (FG)	Died	Never bloomed much all season	Lacked uniformity in size and bloom all season
Sonic Dark Salmon (FG)	Deep coral; One of the better groups early but no bloom by September and not uniform in vigor	Didn't bloom much all season	Not as floriferous as others

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Sonic Fuchsia (FG)	Fuchsia; Alright early but not much bloom or uniformity in size by September		
Sonic Light Pink (FG)	Died	Alright early but lacking uniformity in size and vigor by August and not blooming well	Lots of blooms early, few later but nice, healthy plants
New Guinea Impatiens (cont.) Sonic Peach (FG)	Deep coral pink; Alright but not uniform in bloom or vigor	Uniform with good bloom early but not much bloom by August	Nice; bright and uniform early; not uniform in size or bloom by August
Sonic Red (FG)	Small plants and not much bloom	Alright early but not much bloom in August	Not many blooms early; better in August, nice plants
Sonic Scarlet Blush (FG)	Red-orange; Small, not uniform in size, not much bloom	Not uniform in bloom early; not uniform in size later and not many blooms	Good bloom early; not as full by August
Sonic Sweet Cherry (FG)	Red/white; Some plants died, not much bloom or vigor in others	Nice color, doing well early but not much bloom in August	Uniform and floriferous early, not as floriferous as others later
Supersonic Lavender (FG)	Dead by September	Not much bloom all season	Not as floriferous as others early; color dull although plants were healthy
Supersonic Pastel Pink (FG)	Not much bloom or vigor and some plants dead by September	Uniform but not much bloom all season	Good bloom and color early but not uniform in size; floriferous, healthy and nice later.
Impatiens wallerana	In Fargo, some of these were in a spot that had been ve Dickinson did very well in the raised beds and the Willist		
Accent Limited Edition Mix (GS)	Small and not as vigorous as other impatiens	Not Tested	Not Tested
Carnival Deep Pink (Da)	Not much bloom early-better later; did alright most of the season	Slow to bloom; doing alright by August	Small early with low bloom; by August uniform, floriferous and nice
Carnival Deep Rose (Da)	Slow to bloom but did well by the end of the summer	Also slow to bloom but doing alright by August	Same as 'Carnival Deep Pink'
Carnival Lavender Blue (Da)	Not much bloom or vigor all season	Died after transplantingnot sure why	Not as vigorous as other cultivars and not as much bloom
Carnival Lilac (Da)	Deep fuchsia pink; Did alright but didn't have much bloom or uniformity most of the season	Slow to bloom; alright in August	Small early with low bloom; by August had good bloom
Carnival Metallic Deep Salmon (Da)	good bloom, vigor and uniformity	This was the most vigorous impatiens in the Dickinson plots; not uniform in size, though	Really nice by August with good bloom, vigor and uniformity
Carnival Metallic Lilac (Da)	Pink lavender; Did ok but not as uniform in vigor or size as some others	Good vigor and bloom, especially by August	Did well but not quite as floriferous as some other cultivars
Carnival Mix (Da)	Small, not uniform in vigor or bloom most of the season	Not uniform in size but bloom was alright	Good mix of colors but not uniform in bloom
Carnival Orange (Da)	Not as vigorous as some others and not uniform in size most of the season	Good bloom and uniformity, especially by August evaluation	By August these were very nice with good bloom, vigor and uniformity
Carnival Red (Da)	Small and not as much bloom as others all season	Slow to bloom; lacked uniformity in size during August evaluation	Nice plants early but small compared to some others; did well by August evaluation
Carnival Salmon (Da)	Did alright; good vigor later in the season but not as uniform in bloom as others	Good bloom and uniformity by August evaluation	Nice, bright plants with lots of flowers by August
Carnival Scarlet (Da)	Red; Small and not as vigorous as others but bloom was ok by the end of the season	Not Tested	Not Tested
Carnival Violet (Da)	Deep violet burgundy; Small and not much bloom all season	Not much bloom or vigor all season	Not as vigorous as some others all season
Carnival White (Da)	in the season	No vigor and not much bloom	Did well but not quite as floriferous as some other cultivars
Circus Orange White (PAS)		Not uniform in size and not much bloom; plants not as full or vigorous as some others	Not uniform in size or bloom all season; not as floriferous as others but pretty flower color

Dazzler Blue Pearl (Ball)	Lavender; Not uniform in size or bloom	Not uniform in size; otherwise did alright	Did alright although there was one sickly plant; good bloom
Dazzler Pink Improved (Ball)	Pale pink; Good bloom and showy; nice bright color	Not as vigorous as others but looked like irrigation missed this corner of the bed	Not uniform in size; bloom not as good as some others
Dazzler Star Mix (Ball)	Red, pink and coral all with white; No vigor all season and not much bloom	Not much bloom and somewhat leggy; next to Dazzler Pink Improved' in dry area of bed	Only 3 of 6 plants survived; good bloom but not as vigorous as some others
Impatiens (cont.) Fanciful Coral (Ball)	) Pinkish coral; Did well all season, especially into August and September with good bloom and vigor	Nice vigorous plants but not uniform in bloom	Uniform, floriferous and nice show by August
Fanciful Orchid Rose (Ball)		Good vigor and bloom early; decline in bloom by August	Was blooming better in July than August although had good vigor all season
Fanciful Red (Ball)	Not as floriferous as others all season	Not as uniform in size as some others	Nice plants all season with good bloom, vigor and uniformity
Fanciful Salmon (Ball)	Did alright; good vigor but not uniform in bloom although it looked good	Not as much bloom as others all season	Same as for 'Fanciful Red'
Mosaic Lilac (GS)	Alright early in the season but not much bloom or vigor by September	Not Tested	Not Tested
Mosaic Rose (GS)	Did alright, had good vigor but wasn't as floriferous as some others	Not Tested	Not Tested
Showstopper Buttercream (Ball)	Creamy white; Not uniform in size or vigor	Nice vigorous plants but not as showy as some others with brighter colors	Not as floriferous as others all season
Showstopper Cotton Candy (Ball)		Plants with creamy-white flowers and pink flowers; not as floriferous as others	Looks good; both cream and pink flowersis this a mix?
Stardust Rose Improved (PAS)	Dark rose with white center; Nice early but by the end of the season had good vigor and bloom with a bright show	Did alright but wasn't as floriferous as some others	Good performer all season with good bloom, vigor and uniformity
Stardust Salmon (PAS)	Salmon with white center; Was a good performer all season but not as showy as some others.	Did alright	Not as uniform or floriferous as others but nice color
Stardust Violet (PAS)	Deep pink with white; Not uniform in size but bloom was good.	Not uniform in size or bloom	Not as uniform as others but pretty flower color
Sun and Shade Pink Splash (Gri)	Deep pink, dark center; Did alright; good bloom by the end of the season but not uniform in size	Plants were vigorous all season but bloom wasn't as good as other cultivars	Did alright but not as much bloom or vigor as many other cultivars
Sun and Shade Violet (Gri)	Not as much vigor as others, not uniform in bloom	Not Tested	Not Tested
Super Elfin Blue Pearl (PAS)		Good vigor and bloom early; lacking uniformity in size later but bloom still good	Good bloom all season; good uniformity and vigor in August
Super Elfin Pink Deep (PAS)	Pink; Did alright but lacked uniformity in bloom and size.	Not uniform in size early; not as floriferous as some others later	Not uniform in size all season and not as vigorous as some others
Super Elfin Ruby (PAS)	Deep pink-red; No vigor early and not uniform in size or bloom most of the season.	Nice bloom early; did alright	Did alright but not as uniform as some others
Swirl Raspberry (PAS)	Deep pink; Did well with good bloom and uniformity by the end of the season.	Good vigor but not uniform in size; bloom ok	Did alright; bright color and good bloom
Victorian Rose (AAS '98)	Pink, double flowers; Did alright, wasn't uniform in bloom all season but vigor was ok	Lacked uniformity in size all season and bloom wasn't that great	Uniform all season but not as much bloom as other cultivars
Incarvillea sinensis 'Cheron' (Pk)	Creamy white trumpet shaped flowers; Did very well by August with good bloom, vigor, uniformity	Not Tested	Not Tested
Ipomoea alba (Moon Vine) (Pk)		Just starting to vine in July, was very vigorous in August but no bloom	Not Tested
I. batata 'Blackie' (Pk)	Good vigor and nice burgundy color on leaves but there are a lot of holes (slugs?) in leaves	Not uniform in spread otherwise vigorous and good, holes in leaves (insects?)	Did well, nice ground cover although holes in leaves here, also
			· · · · · · · · · · · · · · · · · · ·

I. x imperialis 'Mt. Fuji Mix' (Pk)	Good vigor but was being overtaken by hyacinth bean later in the summer	Not Tested	Not Tested
I. (mina) lobata 'Citronella' (Pk)	Good vigor all season, not many flowers but still ok, being overrun by hyacinth bean	One of the better annual vines, had good vigor and bloom and vined well	Good vigor, climbing well and had good bloom
I. (mina) lobata 'Firecracker Vine' (Pk)	Good vigor but not many blooms and was being overrun by hyacinth bean	Best of the annual vines here, good bloom and vigor, vined nicely	Not Tested
I. x multifida 'Cardinal Climber' (Pk)	Good vigor all season but also being overrun by the hyacinth bean	Good vigor all season, not blooming much by August evaluation	Not doing much in July with only a few red flowers, looked good in August
Ipomoea nil 'Minibar Rose' (Pk)	Nice vigorous plant but only a few flowers	Not Tested	Not Tested
I. quamoclit (Cypress Vine) 'Mix' (Pk)	Couldn't find	White flower, ferny foliage; Didn't bloom much all season but had nice, ferny foliage	Not doing much in July and couldn't find it in August
I. quamoclit (Cypress Vine) 'Red' (Pk)	Couldn't find	Red flowers - ferny foliage; Not vining well in July but nice by August, not many flowers, though	Not doing much early, in August had a few red flowers but still not too vigorous
Kniphofia uvaria 'Flamenco' (AAS '99)	Only 2 of 12 plants blooming in July, rabbits eating?, nice flowers but not uniform in size or bloom	Not blooming by July evaluation, not uniform in size of bloom all season but flowers are striking	Never bloomed well and it looked like rabbits might have been eating it
	Purple flowers; Very, very vigorous (too vigorous?) - overtook the vine area by September	Not Tested	Not Tested
Lagarus ovatus (Hare's Tail Grass) (Pk)	Did alright but was weedy looking early, something was eating the seed heads as well	Did well early with nice heads but by August the plants were mostly dead although seed heads nice	<sup>S</sup> Not Tested
Leonotis leonarus 'Staircase' (Pk)	Orange; Very vigorous but slow to bloom (end of July), unique but not too showy	Not Tested	Not Tested
Limonium sinuatum 'Sinuata Mix' (McF)	Healthy early but just starting to bloom in July, good bloom later but lots of yellow-not much mix	Not Tested	Not Tested
L. sinuatum 'Soiree Mix' (Pk)	Nice color mix; Good bloom all season but not uniform in height	Not Tested	Not Tested
L. sinuatum 'Sunset' (Pk)	Peach, yellow, cream; Not too showy but good bloom, good uniformity, vigor and bloom by September	Not Tested	Not Tested
Lobelia erinus			
Blue Moon (Nov)	Deep blue; Not uniform in size early, not much vigor all season	Not Tested	Not Tested
Half Moon (Nov)	Light blue with white center; Best of the group all season, still not much vigor but bloom alright	Not Tested	Not Tested
Midnight Moon (Nov)	Deep blue; Did alright	Not Tested	Not Tested
	White; Not uniform in size early, not uniform in vigor or bloom all season	Not Tested	Not Tested
Rose Moon (Nov)	Rose; Small and no vigor all season	Not Tested	Not Tested
Sky Moon (Nov)	Light blue; Small and no vigor all season	Not Tested	Not Tested
Lobularia maritima			
Easter Basket Mix (Pk)	White, lavender mix; Good bloom but not uniform in size early, nice bloom and uniformity by Sept.	Not Tested	Not Tested
Golf (CI)	Lavender, rose, white; Good bloom and fairly uniform early, also doing well in September	Not Tested	Not Tested

Pastel Carpet (Pk)	Cream, lavender, pink, white; Good bloom and fairly uniform all season	Not Tested	Not Tested
Snow Crystals (RS)	White; Not as uniform as 'Snowcloth Improved' but still nice, uniform and floriferous in September	Not Tested	Not Tested
Snowcloth Improved (Pk)	White; Very uniform, floriferous and nice all season	Not Tested	Not Tested
Wonderland Mix (Bod)	Lavender, white, rose; Floriferous early but not uniform in size, not as uniform as others in Sept.	Not Tested	Not Tested
Malope trifida 'Pink Queen' (Pk)	Pink; Only 2 of 6 survived transplanting, slow to bloom and not uniform in size or flowering time	Not Tested	Not Tested
Malope trifida 'Vulcan' (Pk)	Rosy pink; Pretty flowers but only 1 plant survived, it did well but fell over in September	Not Tested	Not Tested
Melampodium paludosum 'Derby' (Ben)	Gold; Not uniform in size or bloom all season but looked good by September	Not Tested	Not Tested
M. paludosum 'Showstar' (Ben)	Gold; Nice bloom early but not uniform in size, uniform and floriferous by September	Not Tested	Not Tested
Mirabilis jalapa 'Broken Colors Mix' (Pk)	Not uniform in height or bloom early, nice bushy plants by end of season	Not Tested	Not Tested
Monarda x hybrida 'Lambada' (Pk)	Lavender; Slow to bloom but healthy all season, by September it was a nice, uniform mass of lavender	Not Tested	Not Tested
Nicotiana alata 'Havana Appleblossom' (Da)	Overtaken by potato beetles and had no vigor and not much bloom all season	Not Tested	Not Tested
N. alata 'Saratoga Red' (GS)	Same as for 'Havana Appleblossom'	Not Tested	Not Tested
N. alata 'Saratoga Rose' (GS)	Same as for 'Havana Appleblossom'	Not Tested	Not Tested
N. alata 'Saratoga White' (GS)	Same as for 'Havana Appleblossom'	Not Tested	Not Tested
N. x sanderae 'Avalon Bright Pink' (AAS '01)	Same as for 'Havana Appleblossom'	Pale pink with dark pink back; Bloom was good all season but plants weren't uniform in size	Not Tested
N. x sanderae 'Domino Mix' (Pk)	Same as for 'Havana Appleblossom'	Not Tested	Not Tested
N. sylvestris (Pk)	White; Potato beetles didn't bother this nicotiana, interesting with its big leaves and tall flowers	Not Tested	Not Tested
Nierembergia hippomanica 'Purple Robe' (Pk)	Purple; Nice purple mound, floriferous and uniform all season	Not Tested	Not Tested
Ocimum basilicum 'Magical Michael' (PAS)	Lacked uniformity in size all season but vigor was good.	Did well early but was being overrun by tomatoes by the second evaluation in July	Died after transplanting
Osteospermum 'Passion Mix' (AAS '99)	Lavender, white, rose; Nice, healthy plants but lacked uniformity in bloom time	Not uniform in size or bloom all season, decline in bloom by August evaluation	Uniform in size early but just starting to bloom, good vigor in August but not uniform in bloom
Pelargonium x hortorum Zonal geraniums			
Black Magic Rose (AAS '02)	Rose with chocolate brown leaves; One of the better performers, good bloom, vigor, uniformity	One of the most vigorous geraniums in Dickinson, very nice by August with good bloom, uniformity	Most vigorous of the group, good bloom and vigor all season, nice
Brasil 99 (FG)	Bright, deep pink; Uniform, bright color but not as floriferous as some others	Very bright color! Uniform earlybetter bloom by August	Nice, bright color; uniform in size
Bravo (FG)	Uniform, floriferous, pretty color, nice plants	Very nice in August-uniform with good bloom and color	Pretty flower, floriferous and uniform early; not as uniform later but ok bloom

Charleston 2000 (FG)	Bright, coral-salmon; Uniform, floriferous, healthy, nice	Another bright color, the plants were doing well by August with good bloom and uniformity	Did alright all season
Charmant (FG)	Coral-pink; Uniform but not as floriferous as some others with star ratings	Good vigor, bloom and uniformity in August	Not as full or vigorous as other cultivars
Diabolo (FG)	Red; Uniform, floriferous, nice color	These weren't as vigorous as others and not as uniform in bloom	Similar to Rocky Mountain Red; did alright
Exotica Series:			
Appleblossom (FG)	Pink, double flowers; Did alright but lacked uniformity in size and bloom by September	Uniform all season, bloom better in August	Did alright all season
Happy Orange (FG)	Reddish-orange; Not as vigorous as 'Happy Violet' but did alright	Uniform, good bloom, nicest in August	Uniform, bright early; not as uniform or floriferous later
Geranium-Exotica(cont.) Happy Violet (FG)	Bright, hot pink; Did well all season with good uniformity, bloom and vigor	Uniform, bright, good bloom all season	Not as uniform in bloom as some others but uniform in size, especially later
Tricolor (FG)		Many comments on unique color foliage from visitors but not as vigorous or floriferous as other cultivars	Nicer here than in Dickinson, more blooms
White Glitter (FG)		Doing well early but better bloom and uniformity by August	Uniform in size all season, color not as showy as others but good bloom
Maverick Coral (GS)	Deep coral; Uniform and floriferous in July, still looking good in September	Not Tested	Not Tested
Maverick Light Salmon (GS)	Pale pink; Nice early with good bloom, still showy in September with good uniformity and bloom	Not Tested	Not Tested
Maverick Pink (GS)	Dark pink; Uniform early but not blooming as well as others, by September ok but not uniform in size	Not Tested	Not Tested
Maverick Red (GS)	Red; Not as floriferous as others in July but doing well in September with a good show of color	Not Tested	Not Tested
Maverick Salmon (GS)	Coral pink; Plants a little smaller than others, not uniform in size but bloom was alright	Not Tested	Not Tested
Maverick Scarlet (GS)	Red; Not blooming as well as others in July, not uniform in vigor-one dying plant	Not Tested	Not Tested
Maverick Star (GS)	Pink with white; Did well early but not as floriferous as others, not uniform in size or bloom this year	Not Tested	Not Tested
Maverick Violet (GS)	Deep red fuchsia; Uniform early but not as vigorous or floriferous as others later	Not Tested	Not Tested
Maverick White (GS)	Uniform early, looked good; uniform, vigorous and very nice later in the season	Not Tested	Not Tested
Multibloom Capri (GS)	Deep salmon pink; Not as vigorous as some others but good bloom on small plants	Not Tested	Not Tested
Orbit Mix (GS)	Mix of colors; Nice color mix, floriferous early, not uniform in size or bloom later in the season	Not Tested	Not Tested
Rocky Mountain Red (FG)		Did alright early, not as uniform in bloom as some others	Plants not as full as others
Samba (FG)		This was probably the least vigorous of all the Fischer geraniums in Dickinson	Showy flowers all season
Schoene Helena (FG)		Did alright but was not as uniform in size as some others, bloom good in August	Full, showy, uniform and nice by August
Stardust Mix (Pk)	Mix of colors; Not as floriferous as 'Orbit Mix', not uniform in size, bloom or vigor	Not Tested	Not Tested

Tango (FG)	Bright red; Did alright, more showy later in the season	Did alright but not as uniform in size or bloom as some other better performers	Smaller plants with big blossoms
Tango Neon Purple (FG)	Bright, deep pink; Good bloom all season and very bright flowers	Bright color! Had better bloom and uniformity in August than July	Uniform, showy and bright by August
Tango White (FG)	Didn't seem to have as much vigor as other cultivars	Not uniform in size or bloom compared to others	Did alright but a little less vigorous than others
Pelargonium peltatum Ivy Geraniums			•
Cascades			
Bright Cascade (FG)	Vigorous and healthy all season	Not as vigorous as Salmon Compact Cascade but still did alright	Did alright
Salmon Compact Cascade (FG)	Did well all season although bloom wasn't as good later in the summer	Top performer all season with good bloom and vigor	Good bloom all summer, a little bit nicer earlier in the season
Ivy Geraniums (cont.) Lambada (FG	) Bright, deep pink; Not as vigorous as Mexicana but still did well	Good bloom early, was a little chlorotic in August	Did alright all season
Mexicana (FG)	Hot pink flowers with white;Nice ground cover, very vigorous and floriferous all season	Not much bloom early, better in August	Not as uniform as some others
Pennisetum setaceum (Fountain Grass) (Pk)	Did well all season	Nice and showy all season	Nice and showy here as well
Pentas lanceolata			
Butterfly Blush (Ball)	Not uniform in size or bloom early; by late August had good vigor and bloom	Slow to bloom but by August was uniform, showy and nice	Not blooming early but best of the Pentas by August; pretty flowers
Butterfly Cherry Red (Ball)	Best of group early; good vigor later but not uniform in bloom	Not as uniform as 'Butterfly Blush' but had good bloom	Not much bloom or vigor all season
Butterfly Lavender Light (Ball)	Uniform but with few blooms early; not uniform in size or bloom later but nice plants		Not tested heregood germination of seed but plants struggled in greenhouse and many died
Butterfly Red (Ball)	No vigor early with few blooms; least vigorous of the group overall	Lost to late frost after planting	Same as for 'Butterfly Lavender Light'
New Look Pink (Ben)	Did better than the pentas have done in the past but not uniform in size or bloom all season	Did better than usual; small plants with good bloom in July; good vigor and bloom in August	No vigor and not much bloom all season
Petunia hybrida	The petunias did well at all three locations. The hedgifte 'Wave' series also did well as did some other spreading		hboring flowers were overtaken completely. The
Floribunda class			
Celebrity Chiffon Morn (AAS '95)	Not as uniform or floriferous as some others in July, did alright in late August and September	Not Tested	Not Tested
Double Madness Pink (Ball)	Hot pink, double flowers; Pretty flowers, uniform early; did well all season	Not blooming early but nice and showy by August	Lots of blooms all season; not uniform in height early; better uniformity in Augustnice show
Double Madness Pink Satin (Bal	I) Pale coral pink; Doing well early with good bloom; got a little leggy by the end of the season		Same as for 'Double Madness Pink'
Double Madness Sheer Improved (Ball)	d Similar to previous two but larger leaves and plants look fuller; good bloom and vigor by August	Same as for previous	Not as floriferous or vigorous as others early but very nice by August
Madness Magenta (Ball)	Deep lavender magenta; Nice all season with good bloom	Slow to bloom but by August was showy and nice	Nicer early with good bloom and uniformity; one plant declining in August
Grandiflora class			

Candypops Summertime (Gri)	Pink with dark veins; Did alright; good bloom by the end of the season but not uniform in size	Plants were vigorous all season but bloom wasn't as good as other cultivars	Did alright but not as much bloom or vigor as many other cultivars
Double Cascade Mix (PAS)	Pretty double flowers but was a bit leggy all season and didn't bloom as well as others.	A little more leggy than others; slow to bloom but nice, big flowers	Not as floriferous as others early; got a little leggy by August
Double Cascade Orchid Mix (PAS)	Lavender to lavender with white, soft pink; Bloom was better by August, pretty flower	Not Tested	Not Tested
Double Cascade Plum Vein (Pk)	Pretty double flower but no vigor and not as many blooms compared to others	Not Tested	Not Tested
Double Cascade Soft Pink (PAS)	Leggier than others all season and bloom wasn't as good	Not Tested	Not Tested
Dreams Mix - Waterfall (PAS)	White, lavender; Good bloom but not uniform early, being overrun by 'Tidal Wave Silver' in August	Not Tested	Not Tested
Dreams Mix - Wild Rose (PAS)	Good bloom all season but not uniform in size early, better uniformity at the end of the season	Not blooming for first evaluation; being overrun by Tidal Wave' petunias by August so hard to evaluate	Did well all season
Lavender Storm (GS)	Lavender; Not as vigorous as 'White Storm' early but by late August was floriferous, vigorous, nice	Not Tested	Not Tested
Petunia (cont.) Pink Morn Storm (GS	Nice, but not as floriferous as other 'Storms' this year and not as nice as in previous years	Not Tested	Not Tested
Pink Storm (GS)	Pink; Not as much vigor as in the past but bloom was good	Not Tested	Not Tested
Prism Sunshine (AAS '98)	Pale yellow; Leggier and not as full as others all seasor	Small with no bloom in July, by August had good bloom and uniformity, nice plants	Good bloom all season, a little leggy in July but looked good
Salmon Storm (GS)	Dark salmon; Lacked uniformity in size all season, good bloom by August	Not Tested	Not Tested
Ultra Limited Edition Mix (GS)	Good color mix but not uniform in size all season, good bloom	Not Tested	Not Tested
White Storm (GS)	Nice mass of white all season	Not Tested	Not Tested
Hedgiflora class		Not Tested	Not Tested
Tidal Wave Cherry (Ball)	Vigorous, floriferous and showy all season	GOOD DIDOM VIDOLADO UNILOMNIV AII SEASOD	Nice show all season with good bloom, vigor and uniformity
Tidal Wave Hot Pink (Ball)	Bright mass of pink; nice all season	Not as floriferous as 'Tidal Wave Cherry' early but by August was very showy and nice	Same as for 'Tidal Wave Cherry'
Tidal Wave Silver (PAS, AAS '02	) Did well all season with good bloom and vigor.	Vigorous early but not many blooms; by August though it was very floriferous and nice	Top performer all season with good bloom and vigor
Milliflora class			
Fantasy Carmine (GS)	Deep magenta pink; Nice bright color but not uniform in size early, not as floriferous as others		Not Tested
Fantasy Crystal Light Salmon (GS)	Lighter coral red with dark veins; Not uniform in size or bloom early, decrease in bloom by August	Not Tested	Not Tested
Fantasy Crystal Red (GS)	Deep coral red with dark veins; Not uniform in size all season but good bloom	Not Tested	Not Tested
Fantasy Ivory (GS)	Yellow white; Not as uniform, vigorous or floriferous as others early, doing alright by August	Not Tested	Not Tested
Fantasy Pink (GS)	Bright deep pink; Not uniform in size or bloom early, good bloom later but one sickly plant	Not Tested	Not Tested

Fantasy Pink Morn (GS, AAS '96)	Most vigorous and floriferous of the group in July, still nice in August but one sickly plant	Not Tested	Not Tested
Fantasy Red (GS)	Not as full or floriferous as other 'Fantasy' petunias all	Not Tested	Not Tested
Fantasy Salmon (GS)	Not as floriferous as others early in the season, doing alright by August	Not Tested	Not Tested
Multiflora class		Not Tested	Not Tested
PrimeTime Blue (GS)	Good bloom early but not uniform in size, leggy by August and bloom not as good	Not Tested	Not Tested
PrimeTime Crystal Mix (GS)	Pink, lavender, coral with dark veins; Not uniform in size or bloom, not as floriferous as others	Not Tested	Not Tested
PrimeTime Fiesta Mix (GS)	White, blue, hot pink; Not as vigorous or full as others early, good bloom by August	Not Tested	Not Tested
PrimeTime Lavender (GS)	vigorous and nice by August	Not Tested	Not Tested
PrimeTime Light Blue (GS)	Good bloom early but not uniform in size, floriferous by August but not as vigorous as others		Not Tested
Petunia (cont.) PrimeTime Pink (GS)	Bright, deep pink; Good bloom and uniformity early, still nice in August	Not Tested	Not Tested
PrimeTime Pink Morn (GS)	Dark pink fading to white center; Nice early with good bloom and uniformity, sickly plants by Aug.	Not Tested	Not Tested
PrimeTime Rose (GS)	and floriferous into August	Not Tested	Not Tested
PrimeTime Scarlet (GS)	Not as vigorous or floriferous as some others in July but uniform, doing well into August	Not Tested	Not Tested
PrimeTime Twilight Mix (GS)	Blue, pink, coral; Nice color mix but blues more vigorous, full and nice into August	Not Tested	Not Tested
Prostrate or spreading class		Not Tested	Not Tested
Avalanche Red (Pk)	One of the poorer spreading petunias, no vigor and not much bloom all season	Not Tested	Not Tested
Avalanche Salmon (Pk)	Light coral pink; Not uniform in bloom or size early, not as vigorous or floriferous as others by August	Not Tested	Not Tested
Giant Purple Surfinia (BCG)	Blooming well early; later in the summer had very good bloom, vigor and uniformity		Not uniform in size early; by August it was a vigorous ground cover with good bloom.
Lavender Wave (PAS, AAS '02)	Not uniform in size or bloom early; by later in the season was very nice with good bloom and vigor.		Not as floriferous as others early but very nice by August
Lime Surfinia (BCG)	Lacking uniformity in size and bloom early; doing better later but being a bit overrun by 'Giant Purple Surfinia'		Similar to 'Giant Purple Surfinia'turned into a nice ground cover by August with good vigor and bloom
Misty Lilac Wave (PAS)	Not as vigorous early but really nice later with good bloom and vigor. I like the big flowers.	Vigorous, floriferous and nice all season	Good bloom, vigor and show all season
Pink Wave (PAS)	Uniform, floriferous and nice early; doing alright later but had some yellowing foliage	Not as vigorous as others early; by August very floriferous and vigorousnice	Good bloom, vigor and show all season
Pink Wave Experimental 99wp5 (PAS)		Not as much bloom as others early but by August just as vigorous and floriferous as other 'Waves'	Not as vigorous as others early but nice by August
Purple Wave (PAS, AAS '95)	,	Outstanding all seasoncan't say enough good things about how this one does	Not blooming as well as others early but very nice by August evaluation

Rambling Burgundy Chrome (GS)	eany, by August was nice with good bloom		Not Tested
Rambling Shades O' Pink (GS)	Deep pink; Good bloom and uniformity early, by August was nice with good bloom and vigor	Not Tested	Not Tested
Rose Wave (PAS)	Did well but wasn't as floriferous as others.	Another top performer all season	Bright, good bloom all seasonnice
Trailing Purple (Gri)	Did better earlier in the season with good bloom and vigor; still vigorous later but not as much bloom	Good vigor, bloom and show all season	Good bloom, vigor and uniformity all season
Trailing Red (Gri)	One of the poorer spreading cultivars; was not as vigorous or floriferous as most others		Slow to become established but by August was putting on a good show
Phaseolus coccineus (Scarlet Runne Bean) 'Scarlet Emperor' (Pk)	er Red-orange flowers; Good vigor all season, vined well and had good bloom	Not blooming by July evaluation but by August was vigorous and floriferous - nice	Not Tested
Phlox cuspidata 'Crystal Mix' (Da)	No vigor all season and not much bloom	Not much vigor and few blooms all season	Nicest here of the three locations; good bloom and vigor by August
P. drummondii '21st Century Patriot Mix' (Ball)	Not much vigor or bloom all season	Not uniform in size; slow to bloom but doing alright by August	Did the best here of all three locations; lacked uniformity but had good bloom and was showy
P. drummondii 'Diamond Mix' (Da)	No vigor all season and not much bloom		This was being overrun by 'Misty Lilac Wave' petunia in August and was hard to evaluate but looked good
Portulaca grandiflora 'Margarita Rosita' (AAS '01)	Rosy-pink; Uniform early with good bloom and vigor, by August had declined in vigor and bloom		Small and not much bloom in July, not uniform in vigor in August with a few sickly plants
P. grandiflora 'Sundial Peach' (AAS '99)	Coral-salmon; Same as 'Margarita Rosita'	Not uniform in spread early and not many blooms, by August bloom better but plants 'wilty'	Not too much vigor early, did better in Fargo
Rudbeckia hirta 'Cherokee Sunset' (AAS '02)	Orange, gold with bronze shading; Good bloom, good vigor and pretty flowers	Not blooming in July, by August had good bloom but not uniform in size	Not uniform in size or bloom early, by August had a nice mix of colors but still not uniform in size
R. hirta 'Indian Summer' (AAS '95)	Just starting to bloom in July, did well but not as vigorous as in past years	Not Tested	Not Tested
R. hirta 'Sonora' (Ben)	Pretty flowers, uniform in size but not vigor	Not Tested	Not Tested
Salvia coccinea 'Snow Nymph' (Pk)	White; Just starting to bloom in July, was vigorous and nice by late August	Not Tested	Not Tested
S. farinacea 'Cirrus' (Pk)	White-gray; Good bloom early but not uniform in bloom, better bloom and uniformity by August	Not Tested	Not Tested
S. farinacea 'Reference' (Ben)	Not uniform in size all season but had good bloom by August	Not Tested	Not Tested
S. splendens 'Firecracker Red' (Gri)	No bloom or vigor in July, not much better in August	Not Tested	Not Tested
S. splendens 'Salsa' Series (GS)	Mix of colors; These did poorly this year with little vigor or bloom all season	Not Tested	Not Tested
S. splendens 'Vista Mix' (PAS)	One of the more vigorous groups; better bloom later in the summer; not uniform in size	No vigor early with few blooms; good bloom by August but not uniform in size	Small and no vigor; not much bloom
S. splendens 'Vista Red' (PAS)	Another of the more vigorous groups; bloom good but not uniform in size	Similar to 'Vista Mix'	Small plants all season; not much bloom
Sanvitalia speciosa 'Aztec Gold' (Ben)	Nice plants with good bloom all season	Lots of unopened flowers when evaluated in July (due to cool, cloudy weather?); nice little plants in August	
Scabiosa atropurpurea 'QIS Scarlet' (Pk)	Deep red; Good bloom all summer, dead flower heads also attractive, good vigor	Not Tested	Not Tested
S. atropurpurea 'Sweet Scabious Mix (Pk)	K'Lavender, burgundy, white; More vigor and blooms than 'QIS Scarlet', nice	Not Tested	Not Tested

Senecio cineraria 'Cirrus' (Pk)	Silvery foliage with rounded edges; Did alright all season	Not Tested	Not Tested	
S. cineraria 'Silverdust' (Pk)	Silvery foliage that was finely divided; Did alright but lacked uniformity in size	Not Tested	Not Tested	
Solanum sp. (Easter Egg Plant) (Pk)	Purple flowers; Looks like eggplant, lots of 'eggs' but not too showy, had Colorado potato beetles	Not Tested	Not Tested	
Stipa tenuissima 'Angel Hair' (Pk)	Did well all season including after a hard frost	Did well all season with good vigor and uniformity	Nice plants here but not uniform in size, also noticed volunteers coming up from last year	
Tagetes erecta (African marigold)				
American Indian Yellow (Gri)	Full and uniform early, by August still nice but not as uniform as 'Discovery Yellow'	Not Tested	Not Tested	
Antigua Gold (GS)	Uniform, vigorous, floriferous and nice all season	Not Tested	Not Tested	
Antigua Orange (GS)	still nice but not as uniform in bloom	Not Tested	Not Tested	
Antigua Primrose (GS)	good bloom but still not as uniform in size	Not Tested	Not Tested	
Antigua Yellow (GS)	Not as uniform or full as some others early, dead heads detracted from appearance by August	Not Tested	Not Tested	
African Marigold (cont.) Discovery Orange (Bod)	Uniform, floriferous and vigorous in July, still doing well in August	Not Tested	Not Tested	
Discovery Yellow (Bod)	Nice but not as full or uniform as some others, by August very nice with good bloom and vigor	Not Tested	Not Tested	
Inca Gold (GS)	Uniform early with good bloom and vigor, not quite as floriferous in August	Not Tested	Not Tested	
Inca Orange (GS)	Uniform, vigorous, floriferous and nice all season	Not Tested	Not Tested	
Inca II Yellow (GS)	Floriferous, vigorous and nice in July, dead heads detracted from appearance in August	Not Tested	Not Tested	
Perfection Orange (GS)	Uniform, vigorous, floriferous and nice all season	Not Tested	Not Tested	
Perfection Yellow (GS)	Good uniformity early but not as floriferous as some others, nice in August but one plant splitting	Not Tested	Not Tested	
Tagetes patula (French marigold)		Not Tested	Not Tested	
Aurora Mix (GS)	One large plant, otherwise good bloom and show	Not Tested	Not Tested	
Bonanza Bolero (AAS '99)	Nice mass of color early with good vigor and uniformity, still nice in August	Doing well in July but Aster Yellows had shown up by August, not uniform in size	Did alright in July but nicer in August with good bloom and uniformity	
Bonanza Gold (PAS)	Good bloom all season but not uniform in size	Uniform, good vigor and bloom, healthy	Floriferous, showy and nice by August	
Bonanza Mix (PAS)	Good bloom all season but not uniform in size	Not as floriferous as 'Bonanza Gold', not uniform in vigorone declining plant	Did alright but wasn't as uniform or vigorous as other 'Bonanza' marigolds	
Bonanza Orange (PAS)	Good uniformity and bloom all season	Lost this one to a late frost shortly after planting	By August this was floriferous, uniform and vigorous; very showy	
Hero Yellow (Bod)	Not uniform in size or vigor all season, some Aster Yellows in August	Not Tested	Not Tested	

Janie Gold (WG)	Not as uniform or floriferous as others in July, not uniform in August and Aster Yellows present	Not Tested	Not Tested
Janie Mix (WG)	Not uniform in size all season, Aster Yellows in August	Not Tested	Not Tested
Safari Yellow (Bod)	Nice plants but more dead heads than others in July, by August were healthy, floriferous and nice	Not Tested	Not Tested
Troubadour Yellow (WG)	Not uniform in size or bloom in July, good bloom in August but Aster Yellows present	Not Tested	Not Tested
T. tenuifolia 'Luna Lemon Yellow' (Da)	Good bloom early but not uniform in size, still good bloom in August but Aster Yellows present	Not Tested	Not Tested
T. tenuifolia 'Starfire Mix' (Pk)	Not uniform in size or bloom in July, some dying in August (Aster Yellows?) but good bloom	Not Tested	Not Tested
Tanacetum ptarmiciflorum 'Silver Feather' (Pk)	Silver gray foliage - finely divided; Uniform all season, vigorous, nice	Not Tested	Not Tested
Thunbergia alata (Black-eyed Susan Vine) (Pk)	Gold flowers with brown centers; Very vigorous all season, good bloom also	Not Tested	Not Tested
Thymophylla tenuiloba (Dahlberg Daisy) (Pk)	Yellow; Nice little masses of yellow in July, by August still nice although one plant had died	Not Tested	Not Tested
Tithonia rotundifolia 'Fiesta del Sol' (AAS '00)	Orange; Not uniform in size or bloom in July, some plants just starting to bloom, alright in August	Uniform in July but not blooming much, by August was floriferous, uniform and healthy - nice	Small and not blooming in July, not uniform in size or bloom by August
Trachelium caeruleum			
Devotion Blue (PAS)	Purple; Small but uniform early; slow to bloom but nice flowers; short bloom time	Nice plants but short bloom seasonnot blooming for first evaluation and past prime by August	Good bloom with pretty flower; not uniform in size; best of the three Trachelium here
Devotion Purple (PAS)	I like the purple coloration in the stems; pretty flowers but short bloom time	Same as for 'Devotion Blue'	Slow to bloom and not as many blooms as 'Devotion Blue'
Devotion White (PAS)	Smallest plants of the three; lots of flowers but past peak by early September	Most vigorous of the group; otherwise same problem as previous two with short bloom time	Not as floriferous as 'Devotion Blue'; not uniform in height
Passion in Violet (Da)	Lavender; Small but uniform early; short bloom time but pretty flowers	Low germinationdidn't test here	Low germination didn't test here
Tropaeolum majus (Nasturtium)			
Alaska (Pk)	Variegated foliage, not as uniform as others in July, nice in August but some bug damage	Not Tested	Not Tested
Empress of India (Pk)	Red, orange flowers - green-purple leaves; Not as floriferous as others although vigor was good	Not Tested	Not Tested
Jewel of Africa (Pk)	Orange, yellow, gold - variegated foliage; Good bloom in July, a bit more leggy than others	Not Tested	Not Tested
Moonlight (Pk)	Very nice early with good bloom and vigor, still nice in August	Not Tested	Not Tested
Whirlybird Mix (Pk)	Floriferous and vigorous early, still nice in August	Not Tested	Not Tested
Verbena x hybrida			
Crystal Ball Mix (PAS)	Nice mix of colors but not as full as others in July, bloom had declined some by August	Not Tested	Not Tested
Novalis Deep Blue/White Eye (Ben)	Deep purple-white eye; Floriferous, uniform and vigorous in July, still vigorous in August but bloom declined	Not Tested	Not Tested

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Quartz Blue (PAS)	Lavender blue; Did well all season; by late August and September it was one of the better bloomers	Did alright but not much bloom by August	Nicest verbena here all season; good bloom into August
Quartz Burgundy (AAS '99)		Not uniform in bloom or size early, pretty color, by August had the best bloom of the verbenas here	Not uniform in size or bloom in July, did alright by August
Quartz Formula Mix (PAS)	Uniform; good vigor; did alright all season	Not uniform in size or bloom; good color mix	Slow to bloom; nice bloom later but not uniform in size
Quartz Red Eye (PAS)	Red with white eye; Good bloom, vigor and uniformity early; past peak bloom by second evaluation	Decline in bloom by August	Slow to bloom but had nice bloom during August evaluation
Quartz Scarlet (PAS)	Nice mass of red color early in the season; not as good of bloom later but plants nice	Least vigorous of the verbena in Dickinson plots	Good bloom with nice red flowers; not uniform in size early
Quartz Waterfall Mix (PAS)	Light and dark blue; Good bloom and uniformity early; one of the better blooming ones by late August	Not uniform in bloom; decline in bloom by August	Slow to bloom; not uniform in size or bloom during August evaluation
Salmon Tapien (BCG)	Dark, coral pink; Nice early with good bloom and vigor. By Sept. it was nice but overrun by 'Imagination'	Had good vigor but bloom wasn't very good	Slow to get going but by August it had turned into a nice ground cover
White Temari (BCG)	Doing well early; later in the summer bloom had declined some but it was still vigorous.	Never had much vigor and not many blooms	Lacking in vigor all season
Verbena x speciosa (tenuisecta) 'Imagination' (AAS '93)	Purple; Good vigor all season but bloom was better in July, had declined by late August	Not Tested	Not Tested
Viola wittrockiana 'Ultimo Morpho' (AAS '02)		Blue and yellow; Very nice in July with good bloom, vigor and uniformity, still nice in August	Nice all season with good bloom, vigor, and uniformity; pretty flowers
Wahlenbergia undulata 'Melton Bluebird' (Pk)	Pale blue, dainty flowers; Only three plants of six survived to July and only one of those to August	Not Tested	Not Tested
Xeranthemum annuum (Immortelle) (Pk)	Lavender; Gray-green foliage, nice bloom and uniformity in July, decline in vigor by end of August	Not Tested	Not Tested
Zinnia angustifolia 'Crystal White' (AAS '97)	Creamy white; Good bloom and vigor all season but not uniform in size	Uniform in size and bloom in July, still good bloom in August but not uniform in height	Not uniform in size in July, not blooming as well as it could be in August
Z. angustifolia 'Star Bright Mix' (Pk)	Orange, white; Not uniform in size all season but good bloom	Not Tested	Not Tested
Zinnia elegans			
Benary's Giant Mix (Ben)	Just starting to bloom in July, uniform, vigorous and nice by end of August		Not Tested
Blue Point Formula Mix (Ben)	Just coming into bloom nicely in July, still doing well into August	Not Tested	Not Tested
Candy Stripe (Pk)	Creamy, yellow with red splotches; Better vigor than last year but color dull	Not Tested	Not Tested
Park's Picks Mix (Pk)	Nice color mix; Just starting to bloom well by July evaluation, dead heads detracted some in August	Not Tested	Not Tested
Peter Pan Mix (GS)	Good bloom early but not uniform in size, good bloom in August also but dead heads detracted	Not Tested	Not Tested
Short Stuff Mix (GS)	More uniform than some others and good bloom	Not Tested	Not Tested
Zinnia hybrids			
Profusion Cherry (AAS '99)		Most vigorous of the 'Profusions' in July, good uniformity in August and bloom good	Not much vigor or bloom early, did better in Fargo and Dickinson
Profusion Orange (AAS '99)	Good bloom and vigorous all season, looked especially	acked uniformity in size early but best bloom of	Same as 'Profusion Cherry'

Profusion White (AAS '01) Not as floriferous as other 'Profusions' in July, by August Least vigorous of 'Profusions' in July, variable in size Did alright but bloom was good but not uniform in size in August but good bloom 'Profusions' he	
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#### 2001 Seed Source List

(An 'R' after the seed source abbreviation indicates retail while a 'W' indicates wholesale or breeding company)

Abbreviatio	nCompany Name and Address	Abbreviatio	onCompany Name and Address	Abbreviatio	nCompany Name and Address
AAS	All-America Selections	CG (R)	The Cook's Garden	PAS (W)	PanAmerican Seed
	311 Butterfield Road Suite 311		P.O. Box 535		622 Town Road
	Downer's Grove, IL 60515		Londonderry, VT 05148		West Chicago, IL 60185-2698
AT (W)	American Takii	Da (W)	Daehnfeldt, Inc.	Pk (R )	Park Seed Co.
	301 Natividad Road		P.O. Box 38		P.O. Box 31
	Salinas, CA 93906		North Manchester, IN 46962		Greenwood, SC 29646
Ball (W)	Ball Seed Company	FG (W)	Fischer USA, Inc.	RS (W)	Royal Sluis
	622 Town Road		2995 Wilderness Place - Suite 102		910 Duncan Avenue
	West Chicago, IL 60185-2698		Boulder, CO 80301		San Juan Bautista, CA 95045
BCG (W)	Bear Creek Gardens	Gri (W)	G. S. Grimes Seeds	WG (W)	Waller Genetics
	(Jackson and Perkins Wholesale)		11335 Concord-Hambden Road		P.O. Box 70
	P.O. Box 9100		Concord, OH 44077		Guadalupe, CA 93434
	Medford, OR 97501				
Ben (W)	Ernst Benary of America, Inc.	GS (W)	Goldsmith Seeds, Inc.		
	1444 Larson Street		P.O. Box 1349		
	Sycamore, IL 60178		Gilroy, CA 95021		
Bod (W)	Bodger Seeds, LTD	JSS (R )	Johnny's Selected Seed		
	1800 North Tyler Avenue		Foss Hill Road		
	South El Monte, CA 91733		Albion, ME 04190		
Bur (R)	W. Atlee Burpee	McF (R )	McFayden Seed Co.		
	300 Park Avenue		Minot, ND 58701		
	Warminster, PA 18974				
CI (W)	Clause Seed	Nov (W)	Novartis (Syngenta Seeds, Inc.)		
	100 Breen Road		5300 Katrine Ave.		
	San Juan Bautista, CA 95045		Downers Grove, IL 60515-4095		