

University of Minnesota

2016 Annual Flower Trial Garden Performance Report



West Central Research and Outreach Center
46352 State Highway 329
Morris, MN 56267
www.wcroc.cfans.umn.edu/flower-research-results

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Impatiens Interspecific *Bounce™ Bright Coral*



University of Minnesota Display and Trial Garden West Central Research and Outreach Center

Horticulture Garden Master Plan



The garden is open to public daily from dawn until dusk; admission is free. Each spring, thousands of annual flowers are planted throughout garden, and are on display from late May or early June through October (depending on regional weather conditions). Hardy trees, shrubs, grasses and garden structures are available for viewing year-round. Visitors are encouraged to take note of the new varieties, and observe and study growth habits, tolerances and visual characteristics of the many varieties on display.

2016 Annual Flower Trial Garden

Performance Report

Steve Poppe, Horticulture Scientist

Introduction

Horticulture staff members at the West Central Research and Outreach Center (WCROC) focus on research-based projects in the areas of annual and perennial flowers, chrysanthemums, small fruits and woody plants. The Horticulture Display Garden provides a venue for education and demonstrates landscape design and plant material options for homeowners and gardeners. Research is conducted in collaboration with the Department of Horticulture Science at the University of Minnesota. The horticulture program utilizes the Horticulture Display Garden, located across Minnesota Highway 329 from the WCROC's main administration building and features several themed gardens and attractions. All plants are labeled, and interpretive signs are located throughout the display garden.

The objective of annual flower research at the WCROC is to evaluate various annual and perennial flower varieties for plant height, width, uniformity, flower size, disease resistance and plant quality characteristics. Evaluations are shared with commercial and amateur bedding-plant growers. Each year, the Top Ten Performing Annuals are selected from the hundreds of cultivars trialed. The 2016 Top Ten performers are pictured with variety names throughout this report.

West Central Minnesota represents a very distinct climate for annual flower trials. The Morris area typically has hot, dry summers with exposure to wind, which provides a

unique opportunity to compare performance of bedding-plant cultivars under regional conditions. The goal of evaluating flowers is to develop recommendations for our unique climate.

Each growing season, hundreds of annual flower cultivars from plant breeding companies around the world are trialed at the WCROC. Cultivars are grown from seed or are vegetatively propagated in our greenhouse.

Flowers are evaluated on a variety of characteristics, including plant height, width, uniformity, flower size and disease resistance. Entries in the annual flower trial are evaluated by a certified trial judge throughout the months of June, July, August and September. Even though the annual flowers are under evaluation, the plants are placed into an aesthetically pleasing design, allowing visitors to enjoy the beauty of the Garden. All flowers are labeled, allowing visitors to take note of top performing cultivars under regional conditions.



Acknowledgements

The Horticulture Department at the University of Minnesota West Central Research and Outreach Center would like to thank the many vegetative and seed companies who continue to participate in our Annual Trials. Without their cooperation and support, the research done at the trial gardens would not be possible. In 2017 there were 257 varieties in field planting, 55 varieties planted in hanging baskets and 45 varieties planted in containers.



Participating Companies:

AFM AmeriSeed LCC Group
All-America Selections
Ball Ingenuity
Ernst Benary of America, Inc.
Ball FloraPlant
Darwin Perennials
Dümmen Group
Euro American Propagators
Floranova, Ltd.
Hem Genetics
Hortcuture Plants
Kieft Seed / Ball Horticultural Company
PanAmerican Seed
Proven Winners North America
Sakata Seed America, Inc.
Selecta / Ball Horticultural Company
Syngenta Flowers

In Kind Donations:

Central Landscape Supply: St. Cloud, MN - www.centrallandscape.com

Colorful Seasons Garden Center: Alexandria, MN - www.colorfulseasons.com

Monrovia, Azusa, CA - www.monrovia.com

In Appreciation:

Every year, numerous volunteer hours are put into the garden. Our volunteer base is essential to the success of our annual flower trial. Volunteers assist with transplanting in the greenhouse, providing garden care, clerical work, data collection, and maintenance. We would like to thank and recognize all those who have volunteered in the Horticulture Garden.



Code	Company Name	Website	Address
AAS	All-America Selections	www.all-americaelections.org	1311 Butterfield Road, Suite 310 Downers Grove, IL 60515
AM	AFM AmeriSeed LCC Group	www.ameriseed.net	399 Chiangmai-Maejo Rd. Nonghan, Sansai, Chiang Mai 50290 Thailand
BAI	Ball Ingenuity	www.ballhort.com	622 Town Road, West Chicago, IL 60185
BE	Ernst Benary of America, Inc.	www.benary.com	2759 Wagner Court, Suite C DeKalb, IL 60115-8609
BF	Ball FloraPlant	www.ballhort.com	622 Town Road West Chicago, IL 60185
DW	Darwin Perennials	www.ballhort.com	622 Town Road West Chicago, IL 60185
DU	Dümmen Group	www.dummengroup.com	15245 Telegraph Road Santa Paula, CA 93060
	The Dümmen Group fields several well-regarded brands such as:		
BT	Bartels		
OG	Oglevee		
OR	ORO		
RF	Red Fox		
EA	Euro American Propagators	www.pweuro.com	32149 Aqueduct Road Bonsall, CA 92003
FL	Floranova, Ltd.	www.floranova.co.uk	Norwich Road, Foxley Norfolk NR20 4SS, UK
HG	Hem Genetics	www.hemgenetics.com	Hemmerbuurt 98 1607 CL - HEM The Netherlands
HC	Hortcouture Plants	www.hortcoutureplants.com	10371 Rainey Road Litchfield, MI 49252
KF	Kieft/Ball Horticultural Company	www.ballhort.com	622 Town Road, West Chicago, IL 60185
PA	PanAmerican Seed	www.ballhort.com	622 Town Road, West Chicago, IL 60185
PW	Proven Winners North America	www.provenwinners.com	111 East Elm Street, Suite D Sycamore, IL 60178
SK	Sakata Seed America, Inc.	www.sakata.com/	18095 Serene Drive Morgan Hill, CA 95037
SL	Selecta/Ball Horticultural Company	www.ballhort.com	622 Town Road, West Chicago, IL 60185
ST	Suntory Flowers, Ltd.	www.suntoryflowers.com	2-13-12 Hirakawa-Cho, Chiyoda-ku Tokyo Japan 102-0093
SY	Syngenta Flowers	www.syngentaflowersinc.com	2280 Hecker Pass Highway Gilroy, CA 95020
TM	Thompson & Morgan	www.tmseeds.com	Poplar Lane, Ipswich, Suffolk, United Kingdom IP8 3BU

Data Collection Methods

Plants were evaluated three times during the growing season, June 29th, July 22nd, and August 9th. This was done to evaluate each variety's performance. The data was taken by the same individual every time to reduce variability in scoring. Plants were evaluated on their flowering and rated on a scale of 1-5.



Petunia African Sunset F1

Horticultural Rating:

- 5 = excellent
- 4 = above average
- 3 = average
- 2 = below average
- 1 = poor

The following traits are considered when giving the ratings; uniformity of habit and flowering, flower numbers relative to others, insect resistance, disease resistance, and

uniqueness. In presenting this data we hope to give a feel for how long the plants were in bloom and how well they bloomed during that period of time.

Other Information for 2016 Trials:

Number of Companies Participating	15
Total number of trial entries	302
Varieties grown in the ground	257
Varieties grown in containers.....	45
Varieties grown in hanging baskets	55
Varieties propagated by seed	139
Varieties propagated by vegetative cuttings..	163



Zinnia Solmar Rose

Monthly Temperature and Precipitation for the 2016 Growing Season:

Month	Average High Temperature	Average Low Temperature	Precipitation (inches)
April	43.4° F	32.4° F	1.85
May	57.7° F	44.8° F	1.99
June	67.8° F	56.5° F	1.89
July	69.6° F	59.2° F	9.88
August	69.0° F	58.1° F	2.79
September	61.2° F	50.6° F	1.68

2016 Cultural Data

Planting Dates:

Planting of the flower trial annuals began on May 24th. Planting was finished up on May 27th.



Zinnia Zahara XL Fire Improved

Growing Season Weather Summary:

The 2016 growing season, (frost free) was 147 days, (average is 144) with the last spring frost on May 15h and a fall frost on October 9th. Rainfall between April 1 and September 30 was 20.08 inches, 1.75 inches above normal. July and August had below normal temperatures with May, June, and September above normal. May through October had 5 days of 90 degrees or greater temperatures.

Fertilization:

Seedlings received treatments of Daniels fertilizer 10-4-3 @ 100 ppm and vegetative material received a treatment of Daniels fertilizer @ 200 ppm prior to transplant. Begonia seedlings received a long day light treatment. Seedlings & vegetative received a drench of plant shield prior to transplant. Plants were transplanted into a soil based mix containing 14-14-14, 3-4 month CRF at a rate of 6 lbs. per cubic yard. All basket

and container media were planted into soilless media and incorporated with 16-9-12, 5-6 month CRF at a rate of eight lbs. per cubic yard. In addition an iron chelate supplement was top dressed on Calibrachoa soil media after planting. All bedding plants received supplemental 20-10-20 on a biweekly basis at a rate of 250 ppm early in the season to a rate of 600 ppm late in the season.

Containers and hanging baskets were treated with 3 fungicide applications throughout the season at approximately 30 day intervals. 1st application was with Subdue Max, 2nd application was with Rootshield Plus and a 3rd application was again Subdue Max fungicide. Flower beds received a granular fertilizer treatment of 19-19-19 prior to planting and one application of ammonium sulfate at the end of June.

Irrigation:

Plants were watered as needed while in the greenhouses. All annuals were watered as needed throughout the season with overhead irrigation or by hand.



Impatiens SunPatents® Spreading Shell Pink

Pest Control:

Deer Scram and Liquid Fence were applied for deer and rabbit control biweekly to the gardens, grounds and selected container plants. Calibrachoa were treated with insecticide spray to control pest issues.



Vinca Solar Avalanche Red

Herbicide Use & Weed Removal:

The herbicide XL2G and Preen were applied right after transplanting and again in mid-August and incorporated with irrigation. Mechanical and hand weeding was applied as needed on a regular basis.

Deadheading:

Geraniums were deadheaded to maintain clean appearance and promote flowering.

Events:

Major 2016 horticulture events at the garden included nine “Come Grow With Us” educational events and Horticulture Night, July 28 which drew over 1600 people. Numerous tours were given during the growing season to Minnesota Master Gardeners, senior groups, professional groups, civic organizations and garden

clubs. During these events annual flowers were highlighted as part of these tours.

For further information on the 2016 Annual Flower Trials at the University of Minnesota, West Central Research and Outreach Center in Morris, MN, feel free to write, call or e-mail:

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Office Phone: (320) 589-1711

E-mail: poppesr@morris.umn.edu

This report is also available online at: www.wcroc.cfans.umn.edu/flower-research-results



*Begonia Whopper
Roze Bronze Foliage*

FIELD PLANTINGS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Alternanthera	Purple Prince	S	PA	4	4	4
Alyssum	North Face	S	FL	3	5	4
Angelonia	Archangel™ Cherry Red	V	BF	4	4	4
Angelonia	Angelface® Perfectly Pink	V	PW	5	5	5
Angelonia	Serenita™ Pink F1	S	AAS	3	4	5
Angelonia	Angelface® Super Blue	V	PW	4	5	5
Angelonia	Angelface® Super Pink	V	PW	5	5	5
Angelonia	Angelonia® Super White	V	PW	5	5	5
Arctotis	hybrid Orange	V	EA	2	3	2
Arctotis	hybrid Pink	V	EA	2	1	1
Arctotis	hybrid White	V	EA	2	1	1
Argyranthemum	Butterfly	V	PW	5	4	4
Argyranthemum	Grandessa™ Pink Halo	V	BF	5	5	4
Argyranthemum	Grandessa™ Red	V	BF	5	4	2
Argyranthemum	Grandessa™ White	V	BF	5	5	4
Argyranthemum	Grandessa™ Yellow	V	BF	5	3	2
Argyranthemum	White Butterfly™	V	PW	5	5	4
Artemisia	Quicksilver™	V	PW	4	4	4
Artemisia	stelleriana Quicksilver™	V	EA	3	4	4
Asclepias	Curassavica Monarch Promise	V	HC	2	2	2
Begonia	Megawatt™ Pink Bronze Leaf	S	PA	3	4	5
Begonia	Megawatt™ Red Green Leaf	S	PA	3	4	5
Begonia	Megawatt™ Rose Bronze Leaf	S	PA/KF	3	4	5
Begonia	Megawatt™ Rose Green Leaf	S	PA	3	5	5
Begonia	Topspin™ Pink	S	SY	3	4	5
Begonia	Topspin™ Rose	S	SY	3	5	5
Begonia	Topspin™ Scarlet	S	SY	3	4	4
Begonia	Topspin™ White	S	SY	3	5	5
Begonia	Whopper Experimental 1620-13T1	S	BAI	5	5	5
Begonia	Whopper Experimental 1620-8T1	S	BAI	5	5	5
Begonia	Whopper Experimental 1630-13T1	S	BAI	5	5	5
Begonia	Whopper Experimental 1630-5T2	S	BAI	5	5	5
Begonia	Whopper® Red Bronze Foliage	S	BAI	5	5	5
Begonia	Whopper® Red Green Foliage	S	BAI	5	5	5
Begonia	Whopper® Rose Bronze Foliage	S	BAI	5	5	5
Begonia semperflorens	Sprint Plus Orange	S	BE	2	2	3
Begonia semperflorens	Sprint Plus Red	S	BE	2	2	3
Begonia semperflorens	Sprint Plus Rose	S	BE	3	3	3
Begonia semperflorens	Sprint Plus White	S	BE	3	3	3
Begonia x hybrida	Funky™ Pink	S	BE	4	4	4
Canna	Cannova® Mango	S	BAI	4	5	5
Canna	Cannova® Orange Shades	S	BAI	4	4	5
Canna	Toucan™ Red	V	PW	3	4	5
Canna	Toucan™ Rose	V	PW	3	4	5
Canna	Toucan™ Scarlet	V	PW	4	5	5
Canna	South Pacific Scarlet F1	S	AAS	3	5	5
Canna	Toucan™ Yellow	V	PW	4	5	4

Highlighted cultivars are rated good to excellent under 2016 conditions.

FIELD PLANTINGS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Coleus	FlameThrower™ Habanero	V	BF	3	4	4
Coleus	French Quarter	V	BF	5	5	5
Coleus	Inferno	V	BF	5	5	5
Coleus	Mainstreet Abbey Road	V	DU	4	5	5
Coleus	Mainstreet Granville Street	V	DU	4	5	5
Coleus	Mainstreet Wall Street	V	DU	3	3	3
Coleus	Premium Sun Crimson Gold	S	PA/KF	5	5	4
Coleus	Premium Sun Lime Delight	S	PA/KF	4	4	5
Coleus	Premium Sun Pineapple Surprise	S	PA/KF	2	3	4
Coleus	Premium Sun Pineapple Surprise	S	PA	2	3	4
Coleus	Ruby Slipper	V	BF	4	4	5
Coleus	Under the Sea Sea Monkey Apricot	V	HC	2	1	1
Coleus	Under the Sea Sea Monkey Purple	V	HC	2	1	1
Coleus	Under the Sea Sea Monkey Rust	V	HC	2	3	4
Coleus	Under the Sea Sea Urchin Copper	V	HC	2	3	3
Coleus	Under the Sea Sea Urchin Neon	V	HC	2	3	3
Coleus	Under the Sea Sea Urchin Red	V	HC	2	3	3
Coreopsis	SunKiss	S	PA/KF	2	4	4
Cosmos	Apollo Carmine	S	FL	4	3	2
Cosmos	Apollo Pink	S	FL	5	3	2
Cosmos	Apollo White	S	FL	4	3	2
Cyperus	Graceful Grasses® King Tut	V	PW	5	5	5
Cyperus	Graceful Grasses® Prince Tut	V	PW	5	5	5
Dahlia	Starsister Crimson Tipped White	V	DU	2	3	3
Dianthus	Jolt™ Cherry	S	PA/KF	4	5	4
Dianthus	Jolt™ Pink F1	S	AAS	3	5	5
Echinacea	Cheyenne Spirit	S	AAS	2	3	3
Gaillardia	Mesa Red	S	PA/KF	3	4	3
Gaura	Sparkle White	S	AAS	3	4	5
Gazania	Enorma Orange w. Ring	S	HG	2	2	3
Gazania	Enorma Red w. Ring	S	HG	2	3	3
Gazania	Enorma Yellow	S	HG	3	4	4
Geranium	Brocade Fire 100	V	DU	2	2	3
Geranium	Brocade Salmon Night	V	DU	2	2	3
Geranium	Fancy leaf Glitterati Ice Queen	V	HC	2	2	2
Geranium	Timeless™ Lavender	V	PW	4	4	4
Geranium	Maverick™ Scarlet Picotee	S	SY	3	4	3
Geranium	Maverick™ Violet Picotee	S	SY	3	4	3
Geranium	Night Brocade Cherry	V	DU	3	4	4
Geranium	Pinto™ Premium Orange Bicolor	S	SY	4	4	5
Geranium	Pinto™ Premium Rose Bicolor	S	SY	4	5	5
Geranium	Pinto™ Premium White to Rose	S	SY	5	5	5
Geranium	Pinto™ Premium White to Rose F1	S	AAS	4	5	5
Geranium	Quantum Light Pink	S	FL	3	4	4
Geranium	Quantum Red	S	FL	3	5	5
Geranium	Quantum Salmon	S	FL	2	3	3
Hibiscus	Honeymoon Deep Red	S	FL	3	4	5

Highlighted cultivars are rated good to excellent under 2016 conditions.

FIELD PLANTINGS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Impatiens	Big Bounce™ Pink	V	SL	5	5	5
Impatiens	Bounce™ Bright Coral	V	SL	5	5	5
Impatiens	Bounce™ Violet 17	V	SL	5	4	4
Impatiens	Bounce™ Pink Flame PPAF	V	AAS	5	5	5
Impatiens	Infinity® Lavender	V	PW	3	4	5
Impatiens	SunPatiens® Spreading Clear White	V	SK	5	5	5
Impatiens	SunPatiens® Spreading Pink Kiss	V	SK	5	5	5
Impatiens	SunPatiens® Spreading Scarlet Red	V	SK	4	5	5
Impatiens	SunPatiens® Spreading Shell Pink	V	AAS	5	5	5
Impatiens	SunPatiens® Spreading Tropical Orange	V	SK	4	5	5
Ipomoea	Sweet Caroline Raven	V	PW	4	5	5
Ipomoea	Sweet Caroline Bewitched Green with Envy	V	PW	5	5	5
Ipomoea	Sweet Caroline Light Green	V	PW	3	3	4
Ipomoea	Sweet Caroline Sweetheart Jet Black	V	PW	3	4	4
Ipomoea	Sweet Caroline Sweetheart Lime	V	PW	4	4	5
Lantana	Lucky™ Red	V	BF	3	4	5
Lavander	Lavance Deep Purple	S	PA/KF	2	2	2
Marigold	Bonanza Yellow	S	PA/KF	4	5	4
Marigold	Fireball	S	PA/KF	3	4	4
Marigold	Strawberry Blonde	S	PA/KF	2	2	2
Marigold	Taishan® Gold Improved	S	BAI	5	5	4
Marigold	Taishan® Yellow	S	BAI	5	4	4
New Guinea Impatiens	Divine Lipstick	S	PA	2	2	2
New Guinea Impatiens	Divine Orchid	S	PA	3	4	5
New Guinea Impatiens	Florific™ Sweet Orange F1	S	AAS	1	1	1
New Guinea Impatiens	SunStanding Cherry	V	DU	3	4	3
New Guinea Impatiens	SunStanding Coral Aurora	V	DU	3	4	3
New Guinea Impatiens	SunStanding Fire Red	V	DU	2	2	1
New Guinea Impatiens	SunStanding Hot Pink	V	DU	4	2	2
New Guinea Impatiens	SunStanding Neon	V	DU	4	4	3
New Guinea Impatiens	SunStanding Pink Frost 11-08	V	DU	3	3	4
New Guinea Impatiens	SunStanding Pink Frost 28-05	V	DU	4	3	4
New Guinea Impatiens	SunStanding Purple	V	DU	3	4	3
New Guinea Impatiens	SunStanding Rose Aurora	V	DU	3	4	3
New Guinea Impatiens	SunStanding Rose Frost 11-15	V	DU	3	3	3
New Guinea Impatiens	SunStanding Salmon	V	DU	4	4	5
New Guinea Impatiens	SunStanding White Cloud	V	DU	3	3	3
Ornamental Pepper	Black Hawk	S	AAS	3	4	4
Ornamental pepper	Black Olive	S	AAS	3	4	4
Ornamental pepper	NuMex Easter	S	AAS	4	5	5
Ornamental Pepper	Sedona Sun	S	PA/KF	3	4	5
Osteospermum	Akila® Daisy White F1	S	AAS	3	5	5
Osteospermum	Sunny™ Fanny	V	EA	4	3	2
Osteospermum	Sunny™ Frida	V	EA	4	3	2
Osteospermum	Bright Lights™ Yellow	V	PW	3	2	2
Penstemon	Arabesque™ Red F1	S	AAS	2	3	5
Pentas	BeeBright™ Lipstick	S	SY	2	2	3

Highlighted cultivars are rated good to excellent under 2016 conditions.

FIELD PLANTINGS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Pentas	BeeBright™ Pink	S	SY	2	3	3
Pentas	HoneyCluster™ Red	S	SY	2	2	4
Perovskia	Blue Steel	S	PA/KF	2	3	5
Petunia	African Sunset F1	S	AAS	4	5	5
Petunia	ColorRush™ Blue	V	BF	4	5	5
Petunia	ColorRush™ Pink	V	BF	5	4	2
Petunia	ColorRush™ Pink Star	V	BF	5	5	4
Petunia	Damask™ Blue	S	SY	4	5	4
Petunia	Damask™ Pink	S	SY	3	4	3
Petunia	Damask™ Purple	S	SY	3	4	3
Petunia	Damask™ Red	S	SY	3	3	3
Petunia	Damask™ White	S	SY	4	5	5
Petunia	Supertunia® Daybreak Charm	V	PW	5	4	4
Petunia	Easy Wave® Silver	S	PA/KF	4	5	5
Petunia	Limbo GP Heather's Mixture	S	HG	5	5	2
Petunia	Limbo GP Mid Blue	S	HG	5	5	3
Petunia	Limbo GP Plum	S	HG	5	4	3
Petunia	Limbo GP Red	S	HG	4	4	3
Petunia	Limbo GP Sky Blue	S	HG	5	5	5
Petunia	Mambo GP Orchid	S	HG	4	3	2
Petunia	Mambo GP Red	S	HG	3	3	1
Petunia	Mambo GP Red Morn	S	HG	4	4	3
Petunia	Mambo GP Rose Morn	S	HG	5	5	4
Petunia	Mambo GP White	S	HG	2	3	4
Petunia	Mambo Mid Blue	S	HG	4	4	4
Petunia	Night Sky	V	SL	4	4	5
Petunia	Supertunia® Picasso in Purple	V	PW	5	5	5
Petunia	Picobella™ Pink	S	SY	4	3	3
Petunia	Supertunia® Pretty Much Picasso	V	PW	5	5	5
Petunia	Radiance Grape	S	AM	5	4	4
Petunia	Radiance Lilac	S	AM	5	3	1
Petunia	Radiance White	S	AM	4	5	4
Petunia	Supertunia® Really Red	V	PW	4	4	4
Petunia	SUCCESS!® Coral	S	BE	2	3	3
Petunia	SUCCESS!® Coral	S	BE	3	4	4
Petunia	SUCCESS!® Pink Chiffon	S	BE	3	3	4
Petunia	SUCCESS!® Pink Chiffon	S	BE	5	5	5
Petunia	SUCCESS!® Pink Vein	S	BE	2	2	2
Petunia	SUCCESS!® Pink Vein	S	BE	3	3	2
Petunia	Tidal Wave® Red Velour F1	S	AAS	4	5	4
Petunia	Tidal Wave® Red Velour F1	S	AAS	5	4	4
Petunia	Trilogy Red F1	S	AAS	4	4	5
Petunia	Supertunia® Vista Bubblegum	V	PW	5	5	5
Petunia	Supertunia® Vista Fuchsia	V	PW	4	5	5
Petunia	Supertunia® Vista Silverberry	V	PW	5	5	5
Petunias	Sweetunia Lemon Frost 03	V	DU	3	4	4
Petunias	Sweetunia Suzie Storm	V	DU	4	5	4

Highlighted cultivars are rated good to excellent under 2016 conditions.

FIELD PLANTINGS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Petunias	Sweetunia Velveteen Rabbit 01	V	DU	4	4	4
Rudbeckia	TigerEye™ Gold	S	SY	5	5	4
Salvia	Mojave Improved Red	S	FL	2	4	4
Salvia	Summer Jewel Lavender	S	AAS	3	3	2
Salvia	Summer Jewel Pink	S	AAS	3	5	2
Salvia	Summer Jewel White	S	AAS	3	5	2
Salvia greggii	Mirage™ Burgundy	V	DW	3	3	3
Salvia greggii	Mirage™ Cherry Red	V	DW	3	3	2
Salvia greggii	Mirage™ Deep Purple	V	DW	2	3	3
Salvia greggii	Mirage™ Violet	V	DW	3	4	4
Snapdragon	Antiquity Orange Bicolour	S	FL	4	5	5
Snapdragon	Antiquity Red Bicolour	S	FL	4	5	5
Verbena	EnduraScape™ Magenta	V	BF	4	4	4
Verbena	EnduraScape™ Pink Bicolor	V	BF	4	5	5
Verbena	EnduraScape™ Purple Improved	V	BF	4	3	4
Verbena	EnduraScape™ Magenta	V	BF	4	4	4
Verbena	EnduraScape™ Pink Bicolor	V	BF	4	5	5
Verbena	EnduraScape™ Purple Improved	V	BF	4	3	4
Verbena	ES Lavender Charme 06	V	DU	5	4	3
Verbena	ES Pink 01	V	DU	4	3	4
Verbena	ES Violet 01	V	DU	5	5	5
Verbena	ES White Blush 04	V	DU	4	2	3
Verbena	Superbena® Royale Peachy Keen (Imp)	V	PW	4	2	2
Verbena	Superbena® Royale Red	V	PW	3	3	3
Verbena	Superbena® Royale Romance	V	PW	3	3	2
Verbena	Superbena® Royale Whitecap	V	PW	4	5	4
Vinca	CAT-01-100 Hot Pink	V	EA	2	4	5
Vinca	CAT-01-101 Pink	V	EA	2	4	4
Vinca	CAT-01-102 White	V	EA	2	4	4
Vinca	CAT-05-100 Pink	V	EA	3	5	5
Vinca	CAT-05-101 Blue	V	EA	2	5	5
Vinca	CAT-05-102 Purple	V	EA	3	5	5
Vinca	CAT-05-103 Pink	V	EA	3	5	5
Vinca	CAT-07-100 Peach	V	EA	3	4	5
Vinca	CAT-07-101 Purple	V	EA	3	5	5
Vinca	CAT-07-102 White	V	EA	4	5	5
Vinca	Jams 'N Jellies Blackberry	S	AAS	2	3	5
Vinca	Mega Bloom Orchid Halo	S	AM	3	5	5
Vinca	Mega Bloom Polkadot	S	AM	2	5	5
Vinca	Mega Bloom White	S	AM	2	5	5
Vinca	Mega Flow Strawberry Red	S	AM	2	3	3
Vinca	Soiree™ Crown Pink	V	EA	2	3	3
Vinca	Soiree™ Crown Rose	V	EA	2	3	4
Vinca	Soiree™ Double Pink	V	EA	3	3	4
Vinca	Soiree™ Double White	V	EA	2	2	3
Vinca	Soiree™ Kawaii™ Coral	V	EA	2	3	4
Vinca	Soiree™ Kawaii™ Lavender	V	EA	1	2	3

Highlighted cultivars are rated good to excellent under 2016 conditions.

FIELD PLANTINGS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Vinca	Soiree™ Kawaii™ Pink	V	EA	3	4	4
Vinca	Solar Avalanche Apricot	S	HG	3	5	5
Vinca	Solar Avalanche Pink	S	HG	4	5	5
Vinca	Solar Avalanche Red	S	HG	3	5	5
Vinca	Solar Avalanche Rose	S	HG	3	5	5
Vinca	Solar Avalanche Violet	S	HG	4	5	5
Vinca	Solar Avalanche White	S	HG	4	5	5
Vinca	Titan Really Red	S	PA	3	5	5
Vinca	Titan® Really Red	S	PA/KF	3	5	5
Zinnia	Double Zahara® Brilliant Mix	S	PA	3	3	4
Zinnia	Double Zahara™ Fire	S	PA/KF	4	5	3
Zinnia	Double Zahara™ Yellow	S	PA/KF	4	5	5
Zinnia	Profusion Double Deep Salmon	S	AAS	4	5	5
Zinnia	Profusion Double Hot Cherry	S	AAS	4	5	5
Zinnia	Solmar Red	S	FL	4	5	4
Zinnia	Solmar Rose	S	FL	5	5	5
Zinnia	Zahara® XL Fire Improved	S	PA	5	5	5
Zinnia	Zahara®XL Pink	S	PA	4	5	3
Zinnia	Zahara® XL White	S	PA	5	5	5
Zinnia	Zahara® XL Yellow	S	PA	4	5	5

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CONTAINERS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Argyranthemum	Butterfly	V	PW	5	5	5
Argyranthemum	White Butterfly™	V	PW	5	5	5
Bacopa	Snowstorm® Blue (Imp)	V	PW	5	5	5
Begonia	Bossa Nova Ivory	S	FL	4	4	3
Begonia	Bossa Nova Orange	S	FL	5	5	3
Begonia	Bossa Nova Pink Glow	S	FL	5	5	3
Begonia	Bossa Nova Pure White	S	FL	5	5	3
Begonia	Bossa Nova Red	S	FL	5	5	3
Begonia	Bossa Nova Yellow	S	FL	3	3	3
Bidens	Cupcake™ Strawberry	V	EA	4	4	4
Coleus	French Quarter	V	BF	5	5	5
Coleus	Mainstreet Wall Street	V	DU	4	5	5
Coleus	Under the Sea Pink Reef	V	HC	4	4	5
Geranium	Brocade Cherry Night	V	AAS	4	4	5
Geranium	Brocade Fire	V	AAS	4	5	5
Geranium	Night Brocade Cherry	V	DU	3	4	4
Geranium	Fancy leaf Glitterati Ice Queen	V	HC	2	3	3
Ipomoea	Sweet Caroline Bewitched After Midnight™	V	PW	5	5	5
Ipomoea	Sweet Caroline Bewitched Green with Envy™	V	PW	5	5	5
Ipomoea	Sweet Caroline Light Green	V	PW	5	5	5
Ipomoea	Sweet Caroline Raven	V	PW	5	5	5
Ipomoea	Sweet Caroline Sweetheart Jet Black™	V	PW	5	5	5
Ipomoea	Sweet Caroline Sweetheart Lime	V	PW	5	5	5
Lavender	Lavance Deep Purple	S	PA/KF	2	3	4
Pansiola	Anytime™ Iris	V	PW	4	3	2
Pansiola	Anytime™ Plum Good	V	PW	5	4	3
Pansiola	Anytime™ Quartz	V	PW	4	5	4
Pansiola	Anytime™ Sugarplum	V	PW	5	4	3
Petunia	African Sunset F1	S	AAS	4	5	5
Petunia	Limbo GP Plum	S	HG	3	4	4
Petunia	Limbo GP Red	S	HG	3	3	4
Petunia	Mambo GP Rose Morn	S	HG	4	4	4
Petunia	Mambo GP White	S	HG	5	4	5
Petunia	Radiance Grape	S	AM	5	5	5
Petunia	Radiance Lilac	S	AM	5	5	5
Petunia	Radiance White	S	AM	5	5	5
Phlox	Gisele™ Hot Pink	V	SL	4	4	4
Phlox	Gisele™ Light Pink	V	SL	4	4	4
Phlox	Gisele™ Light Violet	V	SL	5	5	4
Phlox	Gisele™ Pink	V	SL	5	5	5
Phlox	Gisele™ White	V	SL	5	5	4
SunPatiens	SunPatiens® Spreading Clear White	V	SK	5	5	5
SunPatiens	SunPatiens® Spreading Pink Kiss	V	SK	5	5	5
SunPatiens	SunPatiens® Spreading Scarlet Red	V	SK	4	5	4
SunPatiens	SunPatiens® Spreading Tropical Orange	V	SK	5	5	5

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HANGING BASKETS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Begonia x hybrida	Funky™ Pink	S	BE	4	4	5
Begonia boliviensis	Santa Barbara	S	BE	2	3	3
Calibrachoa	Superbells® Cherry Star	V	PW	4	4	4
Calibrachoa	Superbells® Coralberry Punch	V	PW	4	5	5
Calibrachoa	Superbells® Coralina	V	PW	5	5	5
Calibrachoa	Superbells® Evening Star	V	PW	4	4	4
Calibrachoa	Superbells® Grape Punch (Imp)	V	PW	4	4	4
Calibrachoa	Superbells® Hollywood Star	V	PW	5	4	4
Calibrachoa	Superbells® Morning Star	V	PW	4	4	4
Calibrachoa	Superbells® Pomegranate Punch	V	PW	5	5	4
Calibrachoa	Superbells® Red	V	PW	4	5	4
Calibrachoa	Superbells® Strawberry Punch	V	PW	4	5	5
Calibrachoa	Superbells® Tropical Sunrise	V	PW	5	5	4
Calibrachoa	Superbells® Yellow (Imp)	V	PW	5	5	5
Calibrachoa	Aloha Hot Orange 02	V	DU	5	5	3
Calibrachoa	Aloha Raspberry 01	V	DU	4	5	5
Calibrachoa	Aloha Yellow 04	V	DU	4	4	4
Calibrachoa	Cabaret® Lemon Yellow	V	BF	5	5	5
Calibrachoa	Cabaret® Orange	V	BF	5	5	5
Calibrachoa	Cabaret® Pink Star	V	BF	5	5	4
Calibrachoa	Cabaret® Sky Blue	V	BF	4	5	5
Calibrachoa	Fuseables® Paradise Island	S	PA	5	5	4
Calibrachoa	Hula Blue 07	V	DU	5	5	4
Calibrachoa	Hula Mango 01	V	DU	3	4	3
Calibrachoa	Hula Soft Pink	V	DU	5	5	4
Calibrachoa	MiniFamous® Double Pink 17	V	SL	5	5	5
Calibrachoa	MiniFamous® Neo Light Blue	V	SL	5	5	5
Calibrachoa	MiniFamous® Neo Orange+Red Eye	V	SL	5	5	5
Calibrachoa	MiniFamous® Neo Royal Blue 17	V	SL	5	5	5
Calibrachoa	MiniFamous® Neo White+Yellow Eye	V	SL	5	4	5
Calibrachoa	StarShine™ Apricot	V	SL	5	4	4
Calibrachoa	StarShine™ Cherry	V	SL	5	5	4
Calibrachoa	StarShine™ Pink	V	SL	3	4	4
Calibrachoa	StarShine™ Violet	V	SL	5	4	4
Confetti Mixed Liner	Confetti Garden Denim Blues	V	DU	4	4	3
Confetti Mixed Liner	Confetti Garden Flamethrower	V	DU	4	3	4
Geranium	Timeless™ Lavender (Imp)	V	PW	4	3	5
Lamium	Pink Chablis®	V	PW	5	5	4
Lamium	Purple Chablis®	V	PW	5	5	4
Lobularia	North Face White	S	FL	5	5	5
Petunia	Supertunia® Daybreak Charm	V	PW	4	4	5
Petunia	Supertunia® Picasso in Purple	V	PW	5	5	5
Petunia	Picobella™ Pink	V	SY	5	5	5
Petunia	Supertunia® Pretty Much Picasso	V	PW	5	5	5
Petunia	Supertunia® Really Red	V	PW	4	4	4
Petunia	Supertunia® Vista Bubblegum	V	PW	5	5	5
Petunia	Supertunia® Vista Fuchsia	V	PW	5	5	5

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HANGING BASKETS

Common Name	Cultivar	Seed or Veg.	Source	6/29/2016	7/22/2016	8/9/2016
Petunia	Supertunia® Vista Silverberry	V	PW	4	5	5
Verbena	Superbena® Royale Peachy Keen (Imp)	V	PW	5	5	4
Verbena	Superbena® Royale Red	V	PW	5	5	4
Verbena	Superbena® Royale Romance	V	PW	4	4	4
Verbena	Superbena® Royale Whitecap	V	PW	5	5	4
Vinca	Mega Bloom Orchid Halo	S	AM	4	4	4
Vinca	Solar Avalanche Red	S	HG	5	5	5
Vinca	Solar Avalanche Violet	S	HG	4	5	5

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