

***Abstract.* Rooted cuttings of vegetatively propagated annuals from Proven Winners were planted on February 7, 2016. All cultivars were planted as 3 groups of 6 plants that were randomly placed in the garden. During the second week of each month, evaluations were conducted to measure quality rating. Quality was rated on a scale of 1 to 5 with 5 = excellent and 1 = poor. A consumer preference survey was conducted on between March and May 2018.**

Materials and Methods

Transplant production. Rooted liners of cultivars were transplanted into 400 ml round pots filled with Pro-mix 'BX' (Premier Horticulture Inc., Red Hill PA). After transplanting, plants were placed in an open-sided greenhouse exposed to ambient air temperatures of 30°C day/21°C night. Plants were placed in the greenhouse in January 2018. Plants were watered daily and fertilized at planting with 5 g of Osmocote 15N-4.05P-9.96K (The Scotts Company, Marysville, Ohio).

Field evaluation. The garden has a Margate fine sand soil with 1.6% organic matter, a pH of 6.74, a soluble salt level of 0.30 mS/cm, a nitrate (NO₃-N) concentration of 9.00 mg/kg, an ammonium (NH₄-N) concentration of 5.00 mg/kg, a phosphorus (P) concentration of 27.00 mg/kg, and a potassium (K) concentration of 3.7 mg/kg (samples collected from top 6 inches of soil). Samples were analyzed by the University of Florida's soil testing laboratory.

Plants were planted into the garden on February 7, 2018. Eighteen plants of each cultivar were planted in the garden as 3 randomly placed groups of 6 plants per cultivar. For the first month, plants were watered three times a week for 30 minutes applying 30 ml of water. Irrigation frequency was then reduced to twice a week for 30 minutes. At week 12, the irrigation was turned off due to daily rainfall.

Data collection. Monthly mean air temperature, humidity, solar radiation, rainfall and wind speed were collected using the Florida Automated Weather Network (FAWN) system (Table 2). During the second week of every month, plant quality was recorded for each individual plant in the garden (Table 3).

A consumer preference survey also was conducted in which participants were asked to check all of the cultivars that they liked. The survey was conducted on between March and May 2018 (Table 4).

Results and Discussion

Plants arrived very wet, and many did not survive. Plants highlighted in yellow did not survive and therefore not part of the report.

The weather data collected shows temperature, humidity, solar radiation and wind speed were close to the average south Florida weather and rain fall was average during February and March, and above average during April, May, and June.

Plants reached their peak at 60 DAP. The plants with the highest quality and most improvement or consistency throughout the trial were Calendula Yellow, Calibrachoa Evening star and Holy Smokes, Euphorbia Diamond Frost, Ipomea Kiwi and Raven, Lantana Citrus Blend, Petunia Blue Skies, Paradise, White Charm, and Lovie Dovie, Ruellia Compact Purple, Salvia Fuchsia and Golden Delicious, and Verbena Scarlet. (Table 3)

The highest rated cultivars from the consumer survey were Angelonia Blue and Cascade Blue, *Calibrachoa* Doublette Love Swept, Ipomea Raven, and Petunia Blue Skies and Paradise. (Table 4)

Table 1. List of cultivars planted in the Fort Lauderdale Trial garden on February 7, 2018

Plant	Series	Variety
Angelonia	Angelface	Blue, Cascade Blue, Cascade Pink, Cascade White, Steel Blue, Wedgewood Blue
Calendula		Yellow
Calibrachoa	Superbells	Cardinal Star, Evening Star Imp, Holy Cow, Holy Smokes, Tangerine Punch
Calibrachoa	Superbells Double	Chiffon
Calibrachoa	Superbells Doublette	Love Swept, Sunbeam
Euphorbia		Diamond Frost, Diamond Mountain
Fragaria	Berried Treasure	Pink, Red
Gomphrena	Truffula	Pink
Hypoestes	Hippo	Pink, White
Ipomea	Sweet Caroline	Kiwi, Raven Imp
Ipomea	Sweet Caroline Sweetheart	Red Hawk
Lantana	Luscious	Citrus Blend Imp
Lycopersicon		Garden Gem, Garden Treasure
Ocimum		Amazel
Osteospermum	Bright Lights	Pink
Petunia	Supertunia	Blue Skies, White Charm
Petunia	Supertunia Vista	Bubblegum, Paradise
Ruellia	Machu	Morado
Salvia	Rockin	Deep Purple, Fuchsia, Golden Delicious
Scaevola	Whirlwind	Pink
Solenostemon	Colorblaze	Golden Dreams, Rediculous, Sedona Sunset, Torchlight

Solenostemon	Colorblaze Royale	Cherry Brandy
Verbena	Superbena	Raspberry, Red, Scarlet Star, Whiteout

Table 2. Average mean air temperature, solar radiation, and rainfall measured at the University of Florida Fort Lauderdale Research and Education Center during February and June of 2018. The Florida Automated Weather Network (FAWN) collected the weather data.

Month/Year	Avg. Mean Air Temperature (°C)	Avg. Humidity	Avg. Mean Solar Radiation (W•m⁻²)	Monthly Rainfall (inches)	Maximum Monthly Wind (mph)
February 2018	23.28	79	175.1	1.77	6.53
March 2018	20.69	67	258.55	1.27	5.85
April 2018	24.45	73	281.55	3.33	5.88
May 2018	25.37	81	194.12	15.66	6.66
June 2018	27.29	81	223.73	6.00	3.84

Table 3. Plant rating. Data was collected at initial, 30, 60, 90 and 120 Days after planting (DAP)

Cultivar	Initial Feb 2018	30 DAP March 2018	60 DAP April 2018	90 DAP May 2018	120 DAP June 2018
Angelonia					
Blue	4.5	4.2	3.5	3.3	2.5
Cascade Blue	4.5	5.0	3.3	3.0	2.3
Cascade Pink	4.0	3.8	3.3	3.0	2.3
Cascade White	4.0	4.3	4.0	3.5	2.5
Steel Blue	4.5	4.7	3.8	3.0	2.0
Wedgewood Blue	5.0	5.0	3.8	3.3	2.7
Calendula					
Yellow	4.5	4.7	5.0	4.3	3.0
Calibrachoa					
Cardinal Star	4.0	4.5	3.5	3.3	2.2
Double Chiffon	4.0	3.0	3.8	3.0	2.0
Doublette Love Swept	5.0	4.0	3.5	3.0	2.5
Doublette Sunbeam	4.0	3.7	3.7	3.3	2.3
Evening Star	4.5	3.7	4.2	3.3	2.7
Holy Smokes	4.0	3.7	4.0	3.5	2.2
Tangerine	4.0	4.0	3.8	3.0	2.3
Euphorbia					
Diamond Frost	5.0	5.0	5.0	4.7	4.5
Fragaria					
Pink	4.0	4.3	4.8	4.5	4.0
Red	3.5	4.5	4.8	4.5	4.0
Gomphrena					
Pink	5.0	4.8	3.7	3.3	3.0

Hypoestes					
Pink	4.0	3.7	3.5	3.0	2.2
White	4.0	3.7	3.2	3.0	2.0
Ipomea					
Kiwi	4.0	4.7	4.8	4.0	3.2
Raven	4.0	4.5	4.5	4.0	3.7
Lantana					
Citrus Blend	5.0	5.0	5.0	5.0	4.8
Osteospermum					
Pink	4.0	4.5	4.5	4.0	3.5
Petunia					
Blue Skies	4.5	4.8	4.7	4.0	3.7
Paradise	4.0	4.3	4.5	4.3	3.0
White Charm	3.5	4.3	4.3	3.7	2.5
Supertunia Lovie Dovie	4.0	4.3	4.3	4.0	3.3
Ruellia					
Compact Purple	4.0	5.0	4.7	4.3	3.7
Salvia					
Fuchsia	5.0	5.0	4.8	4.5	4.0
Golden Delicious	4.5	5.0	4.5	4.3	3.3
Scaevola					
Pink	4.5	4.3	4.3	3.7	2.7
Verbena					
Raspberry	3.5	4.0	3.5	3.0	3.0
Red	3.5	3.7	3.5	2.7	2.3
Scarlet	4.0	4.0	4.0	3.3	3.0
Whiteout	4.5	4.5	3.7	3.0	2.5

Table 4. Consumer preference survey conducted between March and May 2018.

Cultivar	Survey (%) 54 Surveys
Angelonia	
Blue	56
Cascade Blue	52
Cascade Pink	7
Cascade White	24
Steel Blue	28
Wedgewood Blue	33
Calendula	
Yellow	18
Calibrachoa	
Cardinal Star	30
Double Chiffon	15
Doublette Love Swept	44
Doublette Sunbeam	20
Evening Star	28
Holy Smokes	15
Tangerine Punch	28
Euphorbia	
Diamond Frost	13
Fragaria	
Pink	13
Red	20
Gomphrena	
Pink	15

Hypoestes	
Pink	33
White	9
Ipomea	
Kiwi	7
Raven	44
Lantana	
Citrus Blend	28
Osteospermum	
Pink	6
Petunia	
Blue Skies	63
Paradise	68
White Charm	31
Ruellia	
Compact Purple	24
Salvia	
Fuchsia	24
Golden Delicous	18
Scaevola	
Pink	9
Verbena	
Raspberry	13
Red	37
Scarlet Star	18
Whiteout	20

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