

# Fort Lauderdale Research and Education Center

## 2019 Trial Garden Report



**Abstract.** Rooted cuttings of vegetatively propagated annuals from Proven Winners were planted on February 25, 2019. 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 between March and May 2019.

### **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 2019. 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 (NO<sub>3</sub>-N) concentration of 9.00 mg/kg, an ammonium (NH<sub>4</sub>-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 25, 2019. Eighteen plants of each cultivar were planted in the garden as 3 randomly placed groups of 6 plants per cultivar. For the three weeks, 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. The irrigation was turned off in June because the rainfall had increased.

*Data collection.* Monthly mean air temperature, humidity, solar radiation and rainfall were collected using the Florida Automated Weather Network (FAWN) system (Table 2). During the third 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 cultivars that they liked. The survey was conducted on between March and May 2019 (Table 4).

### Results and Discussion

The weather data collected shows temperature and humidity were slightly lower than average from February to April, and average in May and June. Solar radiation was close to the average South Florida weather and rain fall was average in February, below average from March to May, and higher than average in June.

Plants reached their peak between 60 and 90 DAP. The plants with the highest quality and most improvement or consistency throughout the trial were Lantana Luscious Goldengate, Helianthus Suncredible Yellow, Portulaca Mojave Red, Solenostemon Colorblaze Wicked Hot, Ipomea Sweet Caroline Red Hawk, Pentas Sunstar Lavender, Pink and Rose, and Salvia Rockin' Blue Suede Shoes and Unplugged So Blue. (Table 3)

The highest rated cultivars from the consumer survey were Impatiens Rockapulco Orange, Solonostemon Colorblaze Wicked Witch, Calibrachoa Blackcurrant Punch, Helianthus Suncredible Yellow, and Petunia Supertunia Indigo. (Table 4)



Impatiens Rockapulco Orange  
Consumer Survey #1 Choice



Lantana Luscious Goldengate  
Best performing plant

Table 1. List of cultivars planted in the Fort Lauderdale Trial garden on February 25, 2019

<b>Plant</b>	<b>Series</b>	<b>Variety</b>
Bidens	Campfire	Flame, Goldilocks Rocks
Calibrachoa	Superbells Tabletop	Blue, Red, White
Calibrachoa	Double Superbells	Amber, Blue, Orange
Calibrachoa	Superbells	Blackcurrant Punch, Dreamsicle, Honeyberry, Watermelon Punch
Capsicum	Fire Away	Hot and Heavy
Euphorbia		Diamond Snow
Gaillardia	Heat It Up	Scarlet, Yellow
Helianthus	Suncredible	Yellow
Impatiens	Rockapulco	Orange
Ipomea	Sweet Caroline	Red Hawk
Isotoma		Patti's Pink
Lantana	Luscious	Goldengate
Lycopersicon	Tempting Tomatoes	Goodhearted
Nemesia	Aromance	Pink
Nemesia	Sunsatia	Cranberry Red
Osteospermum	Bright Lights	Berry Rose, Purple, White
Pentas	Sunstar	Lavender, Pink, Red, Rose
Petunia	Supertunia	Indigo, Raspberry, Sharon, Snowdrift
Portulaca	Mojave	Red
Salvia	Rockin'	Blue Suede Shoes
Salvia	Unplugged	So Blue
Scaevola	Whirlwind	Blue
Solenostemon	Colorblaze	Wicked Hot, Wicked Witch
Sutera	Snowstorm	Blue, Glacier Blue, Pink, Rose, Snow Globe
Verbena	Superbena Sparkling	Amethyst, Rose'

Table 2. Average mean air temperature, humidity, solar radiation, and rainfall measured at the University of Florida Fort Lauderdale Research and Education Center during February and June of 2019. The Florida Automated Weather Network (FAWN) collected the weather data.

<b>Month/Year</b>	<b>Avg. Mean Air Temperature (°C)</b>	<b>Avg. Humidity (%)</b>	<b>Avg. Mean Solar Radiation (W•m<sup>-2</sup>)</b>	<b>Monthly Rainfall (inches)</b>
<b>February 2019</b>	<b>23.07</b>	<b>82</b>	<b>176.18</b>	<b>3.11</b>
<b>March 2019</b>	<b>22.33</b>	<b>75</b>	<b>219.83</b>	<b>2.57</b>
<b>April 2019</b>	<b>24.7</b>	<b>73</b>	<b>253.83</b>	<b>1.63</b>
<b>May 2019</b>	<b>26.37</b>	<b>77</b>	<b>262.82</b>	<b>3.34</b>
<b>June 2019</b>	<b>27.65</b>	<b>81</b>	<b>208.3</b>	<b>12.63</b>

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

<b>Cultivar</b>	<b>Initial Feb 2019</b>	<b>30 DAP March 2019</b>	<b>60 DAP April 2019</b>	<b>90 DAP May 2019</b>	<b>120 DAP June 2019</b>
<b>Bidens</b>					
Campfire Flame	4.8	4.5	4.3	2.7	2.0
Campfire Goldilocks Rocks	5	3.0	3.0	2.5	1.8
<b>Calibrachoa</b>					
Superbells Blackcurrant Punch	4.5	4.0	4.0	3.7	3.5
Superbells Dreamsicle	5.0	5.0	4.5	4.5	4.0
Superbells Honeyberry	4.7	4.3	4.0	4.0	3.5
Superbells Watermelon Punch	5.0	4.5	4.3	4.3	3.0
Superbells Tabletop Blue	4.5	5.0	4.8	4.3	3.3
Superbells Tabletop Red	4.0	4.4	4.0	3.3	2.5
Superbells Tabletop White	4.0	4.5	4.3	3.8	2.8
Double Superbells Amber	4.0	4.0	3.8	3.0	2.3
Double Superbells Blue	4.5	4.0	3.3	2.5	2.3
Double Superbells Orange	4.7	3.5	3.0	2.8	2.0
<b>Capsicum</b>					
Fire Away Hot and Heavy	4.7	4.0	4.0	3.8	3.0
<b>Euphorbia</b>					
Diamond Snow	4.5	5.0	4.8	4.0	3.5
<b>Gaillardia</b>					
Heat It Up Red	4.8	5.0	5.0	4.5	4.0
Heat It Up Yellow	5.0	5.0	5.0	4.3	3.8

<b>Helianthus</b>					
Suncredible Yellow	5.0	5.0	5.0	4.8	4.8
<b>Impatiens</b>					
Rockapulco Orange	5.0	5.0	5.0	4.5	4.0
<b>Ipomea</b>					
Sweet Caroline Red Hawk	5.0	5.0	5.0	5.0	4.5
<b>Isotoma</b>					
Patti's Pink	5.0	5.0	4.5	3.8	3.5
<b>Lantana</b>					
Luscious Goldengate	5.0	5.0	5.0	5.0	5.0
<b>Lycopersicon</b>					
Tempting Tomatoes	5.0	4.5	4.0	3.3	2.8
Goodhearted					
<b>Nemesia</b>					
Aromance Pink	4.0	4.0	4.0	4.0	3.5
Sunsatia Cranberry Red	5.0	4.5	4.3	4.0	3.3
<b>Osteospermum</b>					
Bright Lights Berry Rose	4.5	4.0	4.0	3.0	2.8
Bright Lights Purple	4.5	4.5	4.5	4.0	3.3
Bright Lights White	5.0	5.0	4.3	4.0	3.5
<b>Pentas</b>					
Sunstar Lavender	5.0	5.0	5.0	4.5	4.5
Sunstar Pink	5.0	5.0	4.8	4.5	4.5
Sunstar Red	5.0	5.0	4.8	4.5	4.3
Sunstar Rose	5.0	5.0	5.0	4.8	4.5
<b>Petunia</b>					
Supertunia Indigo	5.0	4.3	4.0	3.2	2.8

Supertunia Raspberry Punch	4.0	4.0	4.0	3.5	2.3
Supertunia Sharon	4.5	3.8	3.0	2.5	2.0
Supertunia Vista Snowdrift	5.0	4.5	3.0	2.3	1.8
<b>Portulaca</b>					
Mojave Red	4.5	4.5	5.0	4.8	4.8
<b>Salvia</b>					
Rockin' Blue Suede Shoes	5.0	4.7	4.5	4.5	4.5
Unplugged So Blue	5.0	4.5	4.3	4.5	4.5
<b>Scaevola</b>					
Whirlwind Blue	5.0	4.5	3.8	3.5	3.2
<b>Solenostemon</b>					
Colorblaze Wicked Hot	5.0	5.0	5.0	4.8	4.8
Colorblaze Wicked Witch	5.0	5.0	4.8	4.5	4.3
<b>Sutera</b>					
Snowstorm Blue	4.0	3.5	2.8	2.5	2.0
Snowstorm Glacier Blue	4.0	4.0	3.0	2.5	1.8
Snowstorm Pink	4.0	4.0	3.5	2.8	2.5
Snowstorm Rose	4.5	4.3	3.2	2.5	2.3
Snowstorm Snow Globe	4.5	4.0	3.0	2.5	2.0
<b>Verbena</b>					
Superbena Sparkling Amethyst	5.0	4.7	3.5	2.8	2.0
Superbena Sparkling Rose	5.0	4.7	3.3	2.8	2.0



**Table 4. Consumer preference survey conducted between March and May 2019.**

<b>Cultivar</b>	<b>Survey % 67 surveys</b>
<b>Bidens</b>	
Campfire Flame	40
Campfire Goldilocks Rocks	13
<b>Calibrachoa</b>	
Superbells Blackcurrant Punch	83
Superbells Dreamsicle	51
Superbells Honeyberry	51
Superbells Watermelon Punch	72
Superbells Tabletop Blue	66
Superbells Tabletop Red	57
Superbells Tabletop White	64
Double Superbells Amber	57
Double Superbells Blue	64
Double Superbells Orange	42
<b>Capsicum</b>	<b>53</b>
Fire Away Hot and Heavy	45
<b>Euphorbia</b>	
Diamond Snow	53
<b>Gaillardia</b>	<b>11</b>
Heat It Up Scarlet	26
Heat It Up Yellow	64
<b>Helianthus</b>	

Suncredible Yellow	79
Impatiens	
Rockapulco Orange	
<b>Ipomea</b>	
Sweet Caroline Red Hawk	38
<b>Isotoma</b>	
Patti's Pink	30
<b>Lantana</b>	
Luscious Goldengate	8
<b>Lycopersicon</b>	
Tempting Tomatoes Goodhearted	26
<b>Nemesia</b>	
Aromance Pink	40
Sunsatia Cranberry Red	72
<b>Osteospermum</b>	
Bright Lights Berry Rose	60
Bright Lights Purple	42
Bright Lights White	15
<b>Pentas</b>	
Sunstar Lavender	72
Sunstar Pink	55
Sunstar Red	60
Sunstar Rose	
<b>Petunia</b>	
Supertunia Indigo	76
Supertunia Raspberry Punch	47
Supertunia Sharon	34

Supertunia Vista Snowdrift	66
<b>Portulaca</b>	
Mojave Red	5
<b>Salvia</b>	
Rockin' Blue Suede Shoes	8
Unplugged So Blue	21
<b>Scaevola</b>	
Whirlwind Blue	2
<b>Solonostemon</b>	
Colorblaze Wicked Hot	45
Colorblaze Wicked Witch	89
<b>Sutera</b>	
Snowstorm Blue	5
Snowstorm Glacier Blue	5
Snowstorm Pink	40
Snowstorm Rose	13
Snowstorm Snow Globe	6
<b>Verbena</b>	
Superbena Sparkling Amethyst	28
Supertunia Sparkling Rose	23