

2020 Spring-Summer Ornamentals Trial Top Performers

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2020 Spring-Summer Ornamentals Trial Top Performers

Shaun R. Broderick

Mississippi State University Truck Crops Branch Experiment Station
Crystal Springs, Mississippi

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ABSTRACT

An ornamental trial to evaluate 215 entries was conducted in spring/summer 2020 in central Mississippi. It examined 137 perennial, 19 hanging basket, 20 shade, 6 edible, and 33 in-ground, full-sun annual (termed annual) entries. Plants were evaluated for their flower coverage, leaf health, and landscape impact, and they were assigned a rating of 1 to 5, with 5 being the highest score. Most entries (72%) received a 3 or higher rating and performed well throughout the trial period. More than 15 annual and perennial entries received a score of at least 4. Ten entries grown mostly for their attractive foliage received scores above 4.3. Most edible crops (strawberries, peppers, and squash) were high yielding with good quality fruit.

INTRODUCTION

Newly developed plant material for landscapes contains potentially favorable characteristics in the horticultural marketplace. Such features may include improved disease resistance, increased flowering, or novel attributes, such as new flower color. While companies market plants for improved performance, this does not always reflect reality. Environmental factors highly influence plant performance. Regional trials provide

useful information to commercial producers and plant breeders to aid plant selection of annuals and perennials. Additionally, these trials serve as a resource for horticultural professionals, educators, and home gardeners in Mississippi and surrounding areas in the Southeast. This ornamental trial was conducted to evaluate the performance of a wide variety of bedding and garden plants in central Mississippi.

METHODS AND MATERIALS

The ornamental trial of 215 cultivars was conducted at the Truck Crops Branch Experiment Station in Crystal Springs, Mississippi (USDA Zone 8b). All entries from Plants Nouveau, Terra Nova Nurseries, Proven Winners, and Walter's Gardens were supplied as rooted plugs. Entries from Ball Horticultural Company and Burpee were provided as either seeds or rooted plugs, depending on the cultivar. Sowing dates were cultivar specific. Seeds were sown in 72-cell plug trays filled with soilless medium (Pro-Mix BX; Premier Tech, Ltd.). The sowing dates were based on recommended production timelines. Plants requiring longer production were sown in January, while other entries

with short production were sown in March (Hamrick, 2003). On March 26, 2020, the hanging basket trial entries were transplanted into 30-cm hanging baskets filled with soilless growing medium (Pro-Mix BX; Premier Tech, Ltd.) and grown according to industry

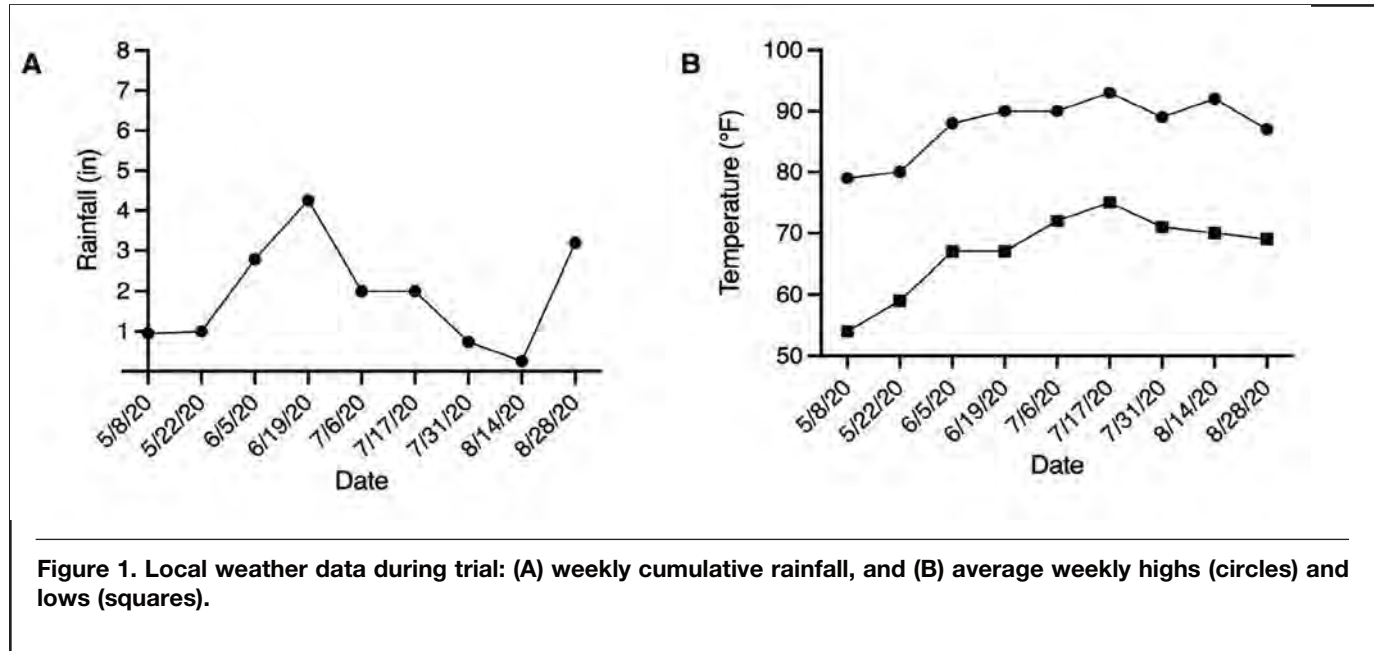
Table 1. Rating scale for trial evaluations.

Score	Description
5	Excellent – 90% +
4	Good – 75% +
3	Fair – 50+
2	Poor – 25% +
1	Unacceptable – <25%

recommendations (Hamrick, 2003). The annuals and perennials were planted in 20-cm-tall, raised boxes containing native soil. After planting, the raised beds were mulched with 2–3 inches of pine bark mulch. Irrigation was supplied through drip tape as needed. No herbicides were applied; weeds were pulled manually. Insecticides were used sparingly on an as-needed basis for fire-ant control.

Semimonthly ratings were based on a 1–5 scale with 5 representing the best rating. Criteria for the ratings

included flower coverage, leaf health, and landscape impact. Ratings correlated with percentages. For example, a flower coverage rating of 5 indicates that at least 90% of the plant’s terminal buds were in flower. A leaf health rating of 5 would indicate that at least 90% of the foliage is free of disease symptoms. Ratings were based on trial criteria per cultivar and not comparisons between cultivars (Table 1). Local weather data were collected during the trial (Figure 1).



RESULTS AND DISCUSSION

Most of the trial entries received satisfactory ratings. A total of 154 entries (72%) rated at a 3 or higher, and 47 entries received a rating of at least a 4 (22%). Highlighted below are top-performing cultivars

from specific categories (Table 2). A full list of performance ratings for the evaluation criteria is also included (Table 3).

Table 2. Top performers.

Type	Rank	Cultivar	Company	Overall score
Annual	1	<i>Begonia</i> Surefire® Red	Proven Winners	4.8
Annual	2	<i>Scaevola</i> Whirlwind® Blue Improved	Proven Winners	4.7
Annual	3	<i>Gomphrena</i> Truffula® Pink	Proven Winners	4.6
Annual	4	<i>Helianthus</i> Suncredible® Yellow	Proven Winners	4.5
Annual	5	<i>Cleome</i> Senorita Rosalita®	Proven Winners	4.4
Annual	6	<i>Angelonia</i> Serenita® White	PanAmerican Seed	4.3
Annual	7	<i>Angelonia</i> Serena® White	PanAmerican Seed	4.2
Annual	8	<i>Begonia</i> Double Up™ White	Proven Winners	4.2
Annual	9	<i>Vinca</i> Valiant™ Burgundy	PanAmerican Seed	4.2
Annual	10	<i>Vinca</i> Valiant™ Lilac	PanAmerican Seed	4.1
Annual	11	<i>Celosia</i> First Flame™ Purple	PanAmerican Seed	4.1
Annual	12	<i>Angelonia</i> Serenita® Pink	PanAmerican Seed	4.1
Annual	13	<i>Begonia</i> Double Up™ Red	Proven Winners	4.1
Annual	14	<i>Vinca</i> Valiant™ Punch	PanAmerican Seed	4.1
Annual	15	<i>Vinca</i> Valiant™ Magenta	PanAmerican Seed	4.0
Annual	16	<i>Angelonia</i> Serena® Purple Improved	PanAmerican Seed	4.0
Basket	1	<i>Vinca</i> Tattoo™ Black Cherry - basket	PanAmerican Seed	4.1
Basket	2	<i>Vinca</i> Tattoo™ American Pie Mixture - basket	PanAmerican Seed	4.1
Foliage	1	<i>Solenostomon</i> ColorBlaze® Royale Pineapple Brandy™	Proven Winners	4.8
Foliage	2	<i>Solenostomon</i> Dragon Heart	Ball FloraPlant	4.8
Foliage	3	<i>Solenostomon</i> ColorBlaze® Royale Apple Brandy™	Proven Winners	4.7
Foliage	4	<i>Solenostomon</i> FlameThrower™ Sriracha	Ball FloraPlant	4.7
Foliage	5	<i>Ipomoea</i> Sweet Caroline Medusa™ Green	Proven Winners	4.7
Foliage	3	<i>Celosia</i> Sol™ Gekko Green	PanAmerican Seed	4.6
Foliage	4	<i>Celosia</i> Sol™ Lizzard Leaf	PanAmerican Seed	4.6
Foliage	6	<i>Ipomoea</i> Sweet Caroline Kiwi	Proven Winners	4.5
Foliage	7	<i>Solenostomon</i> ColorBlaze® Royale Cherry Brandy™	Proven Winners	4.5
Foliage	8	<i>Solenostomon</i> FlameThrower™ Cajun Spice	Ball FloraPlant	4.4
Perennial	1	<i>Cuphea</i> Vermillionaire® - perennial Y1	Proven Winners	4.8
Perennial	2	<i>Salvia</i> Unplugged™ So Blue™ - perennial Y2	Proven Winners	4.7
Perennial	3	<i>Colocasia</i> Maximus Gigante - perennial Y2	Plants Nouveau	4.7
Perennial	4	<i>Colocasia</i> Black Sapphire Gecko - perennial Y2	Plants Nouveau	4.7
Perennial	5	<i>Caryopteris</i> Gold Crest - perennial Y2	Darwin Perennials	4.6
Perennial	6	<i>Colocasia</i> Tea Party - perennial Y2	Plants Nouveau	4.6
Perennial	7	<i>Artemesia</i> Makana™ Silver - perennial Y1	Terra Nova Nurseries	4.4
Perennial	8	<i>Colocasia</i> Heart of the Jungle™ - perennial Y1	Proven Winners	4.3
Perennial	9	<i>Sedum</i> 'Peach Pearls' - perennial Y1	Terra Nova Nurseries	4.3
Perennial	10	<i>Lantana</i> Luscious® Goldengate™ - perennial Y2	Proven Winners	4.3
Perennial	11	<i>Colocasia</i> Coffee Cups - perennial Y1	Proven Winners	4.2
Perennial	12	<i>Salvia</i> White Flame - perennial Y1	Ball FloraPlant	4.1
Perennial	13	<i>Phlox</i> Luminary™ 'Ultraviolet' - perennial Y1	Proven Winners	4.1
Perennial	14	<i>Evolvulus</i> Blue My Mind® - perennial Y1	Proven Winners	4.0
Perennial	15	Phlox Super Ka-Pow™ Fuchsia - perennial Y1	Darwin Perennials	4.0
Perennial	16	<i>Echinacea</i> Artisan™ Soft Orange - perennial Y1	PanAmerican Seed Kieft Seed	4.0
Perennial	17	<i>Lantana</i> Lucky™ Peach - perennial Y2	Ball FloraPlant	4.0
Shade	1	<i>Impatiens</i> Beacon® Bright Red - shade	PanAmerican Seed	4.7
Shade	2	<i>Impatiens</i> Beacon® Coral - shade	PanAmerican Seed	4.7

Foliage Annuals

Annual plants grown primarily for their foliage were evaluated for their landscape performance and rated accordingly. *Solenostemon* species are often used in shaded landscapes, but the ColorBlaze® *Solenostemon* series is marketed for its sun tolerance. *Solenostemon* ColorBlaze® Royale Pineapple Brandy™ scored a season average of 4.8. It did not flower during the trial. Even by Oct. 22, it still had not produced any flowers. Additionally, the leaves never exhibited sun damage. *Solenostemon* Dragon Heart also did not flower during the trial, nor did its leaves show sun damage. *Solenostemon* ColorBlaze® Royale Apple Brandy™, FlameThrower™ Sriracha, ColorBlaze® Royale Cherry Brandy™, and FlameThrower™ Cajun Spice all developed flowers during the trial period, but they still

scored at least a 4.4 (Figure 2). *Ipomoea* Sweet Caroline Medusa™ Green and Sweet Caroline Kiwi™ received scores of 4.7 and 4.5, respectively (Figure 3). They grew well throughout the season; however, they were both damaged by deer after Aug. 14. It would be advisable to avoid their use in landscapes that are impacted by deer.

Celosia Sol™ Gekko Green and Sol™ Lizzard Leaf were bred to be primarily grown for their foliage. They have much larger, colorful leaves and smaller inflorescence than most *Celosia* on the market, such as the First Flame™ series. That said, their flowers were also attractive and added to their overall appearance (Figure 4). Often *Celosia* will deteriorate in the mid to late summer after they have bloomed. However, these *Celosia* did not senesce during the trial and still looked attractive in the garden on Oct. 22.



Figure 2. *Solenostemon* trial entries: (A) Dragon Heart, 07/31/20, overall score 4.8; (B) FlameThrower™ Sriracha, 07/24/20, overall score 4.7; (C) ColorBlaze® Royale Pineapple Brandy™, 07/17/20, overall score 4.7; (D) FlameThrower™ Cajun Spice, 07/24/20, overall score 4.4; (E) ColorBlaze® Royale Cherry Brandy™, 07/24/20, overall score 4.5. The dates are the days the photos were taken.



Figure 3. *Ipomoea* entries: (A) Sweet Caroline Medusa™ Green, 07/24/20, overall score 4.7; (B) Sweet Caroline Kiwi™, 07/24/20, overall score 4.7.



Figure 4. *Celosia* entries: (A) Sol™ Gekko Green, 07/24/20, overall score 4.6; (B) Sol™ Lizzard Leaf, 07/24/20, overall score 4.6.

Flowering Annuals

More than 15 annuals grown primarily for their flowers scored at least a 4. *Begonias* are often grown in shaded areas; however, six *Begonias* were trialed in full sun. *Begonia* Surefire® Red received a score of 4.8. It bloomed heavily throughout the entire trial and withstood the heat and intense sun without suffering damage. *Begonia* Double Up™ White and Double Up™ Red scored a 4.2 and 4.1, respectively (Figure 5). These plants performed well but did have some leaf scorching during July and August. With cooler weather, the plants fully recovered outside of the trial period and were in full bloom on Oct. 22.

For landscapes in need of a low-growing ground-cover plant, *Scaevola* Whirlwind® Blue Improved would be a good choice at a score of 4.7 (Figure 6A). It was densely covered in blue flowers during most of the season and did not have any insect or disease damage. Another prolific bloomer, even in the heat of summer, was *Gomphrena* Truffula® Pink. This highly branched, compact *Gomphrena* received a score of 4.6 and was a strong performer throughout the trial (Figure 6B). *Helianthus* Suncredible® Yellow is one of the most impressive sunflowers we have trialed. It is highly branched, creating a mounding appearance in the landscape, and it continually flowered throughout the

trial. It did develop some minor leaf spot (likely caused by *Cercospora*) in July, but this did not detract much from its appearance (Figure 6C). *Cleome* Senorita Rosalita® received a score of 4.4 and has been a consistent performer over the years in the trial garden. *Celosia* First Flame Purple received a score of 4.1. This plant bloomed so heavily that it covered most of the foliage. Often *Celosia* senesce after they flower. This one eventually senesced at the very end of the trial but held on through most of August.

Several *Angelonia* scored at least a 4, including Serenita® White (4.3), Serentia® Pink (4.1), Serena® White (4.2), and Serena® Purple Improved (4) (Figure 7). These plants bloomed throughout the season and did not experience disease and pest issues. Also, the *Vinca* Valiant™ series performed strongly in the trial garden, specifically cultivars Burgundy (4.2), Lilac (4.1), Punch (4.1), and Magenta (4). They bloomed profusely above clean, glossy, dark-green foliage. They also had no disease or insect issues throughout the trial.

While *Osteospermum* Bright Lights® Red scored a 2.9 and *Dahlia* Dalaya® Raspberry scored a 3.2, it is common for these plants to die out during the growing season completely. Both of the entries continued to survive throughout the trial period. Dalaya® Raspberry went back into full bloom during the fall with the onset of cooler weather.

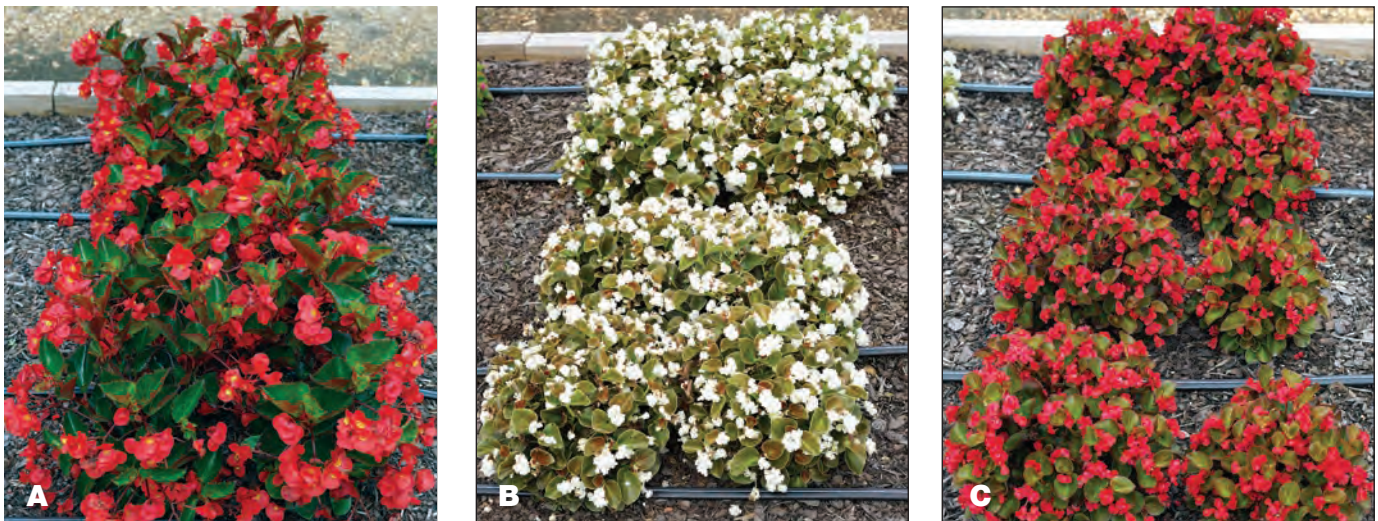


Figure 5. *Begonia* entries: (A) Surefire® Red 07/06/20, overall rating 4.8; (B) Double Up™ White, 07/06/20, overall rating 4.2; (C) Double Up™ Red, 07/06/20, overall rating 4.1.



Figure 6. High-ranking flowering annuals: (A) *Scaevola Whirlwind*® Blue Improved, 07/24/20, overall score 4.7; (B) *Gomphrena Truffula*® Pink, 07/06/20, overall score 4.6; (C) *Helianthus Suncredible*® Yellow, 07/24/20, overall score 4.5.



Figure 7. Angelonia: Serena® Purple Improved (overall score 4), Serena® Rose (3.8), Serena® White (4.2), Serena® Blue Improved (4) (cultivars listed top to bottom).

Hanging Baskets

Hanging baskets that look good in Mississippi during the summer can be challenging due to the summer heat. Two baskets received a score of at least 4: *Vinca* Tattoo® Black Cherry and Tattoo® American Pie Mixture. They bloomed profusely and maintained a compact habit throughout the trial. Other entries deserving mention included the *Fragaria* Berried Treasure series: Pink, Red, and White. These plants

produced plentiful, sweet, and flavorful berries, even in the summer. The berries did not have any significant issues with botrytis (a common problem with strawberries in Mississippi, especially fruit that is not sprayed). *Nemesia* often does poorly in Mississippi heat, but *Nemesia* SunGlow™ Red was surprisingly resilient. While it bloomed less during the summer, it still bloomed continually throughout the entire trial. Commonly, *Nemesia* does not survive the summer heat (Figure 8).



Figure 8. Hanging basket highlights: (A) *Vinca* Tattoo® Black Cherry, 06/19/20, overall score 4.1; (B) *Vinca* Tattoo® American Pie Mixture, 07/17/20, overall score 4.1; (C) *Nemesia* SunGlow™ Red, 05/22/20, overall score 3.8.

Shade-Loving Annuals

The shade trial is conducted under large oak trees at the experiment station and is heavily shaded. Under these conditions, two plants received ratings above 4:

Impatiens Beacon® Bright Red and Beacon® Coral (Figure 9). These varieties bloomed heavily and were vigorous growers. We did not observe any signs of downy mildew during the trial period on any of the *Impatiens*.



Figure 9. Top-performing *Impatiens*: (A) Beacon® Bright Red, 07/31/20, overall score 4.7; (B) Beacon® Coral, 08/14/20, overall score 4.7.

Perennials

This was the second year of conducting the perennial trial; therefore, “Y1” and “Y2” are used to distinguish plants trialed for one or two seasons. A total of 17 cultivars received a score of at least 4. *Cuphea* Vermilionaire® (Y1, 4.8) bloomed heavily throughout the entire year. Some leaf loss occurred during July, but the plant still looked attractive. *Salvia* Unplugged™ So Blue™ (Y2, 4.7) initiated flowers early in the season and continued to bloom heavily throughout the season. *Salvia* White Flame (Y1, 4.1) also bloomed heavily throughout the season. The white flowers contrasted nicely with the clean, green foliage. *Evolvulus* Blue My Mind® (Y1, 4) was a prolific bloomer and would serve well as a groundcover in the landscape. All the *Echinacea* in the trial performed very well. Artisan™ Soft Orange (Y1, 4) was the top-scoring cultivar. The bright-orange flowers were attractive for an extended period and were uniform despite being a seed crop. Artisan™ Red Ombre had uniform growth, but the flower colors ranged from orange to deep red. This was visually appealing in the landscape and added interest through diversity (Figure 10).

Caryopteris Gold Crest (Y2, 4.6) flowered heavily in September and October. This is one of the few perennials to develop woody plant tissue. The yellow-green leaves withstood the intense heat of summer and had a uniform habit after a single pruning in early spring (Figure 11). Two other entries that also develop woody plant tissue are *Lantana* Luscious® Goldengate™ (Y2, 4.3) and *Lantana* Lucky™ Peach (Y2, 4), which thrived

during the summer months. Lucky Peach had a rounded, compact habit, while Luscious® Goldengate™ grew larger, sprawled more, and was less compact.

Some of the perennials are grown as foliage plants and do not develop conspicuous flowers. Nevertheless, these plants can improve landscape appearance and serve as an excellent contrast to flowering plants. Several *Colocasia* performed well in the garden, including Maximus Gigante (Y2, 4.7), Black Sapphire Gecko (Y2, 4.7), Tea Party (Y2, 4.6), Heart of the Jungle™ (Y1, 4.3), and Coffee Cups (Y1, 4.2). They did not exhibit leaf scorching, but some of the older leaves often senesced during the summer heat. It is important to note that Heart of the Jungle™ did develop runners and may spread out to a larger area than the clumping *Colocasia*. Another foliage perennial that performed well was *Artemisia* Makana™ Silver (Y1, 4.4). This plant is being sold as an annual; however, we will trial it through the winter to assess hardiness in this area. *Sedum* ‘Peach Pearls’ (Y1, 4.3) does develop attractive peach flowers in the late summer, but it also has thick, red-green leaves throughout the growing season (Figure 12).

It is common for *Phlox paniculata* to develop powdery mildew in Mississippi. We received several cultivars that are advertised as being powdery mildew resistant. Most of them did not develop powdery mildew symptoms during the trial. *Phlox* Luminary™ ‘Ultraviolet’ (Y1, 4.1) and Super Ka-Pow™ Fuchsia (Y1, 4) bloomed heavily throughout the trial with compact growth (Figure 13).



Figure 10. Perennial highlights: (A) *Cuphea Vermillionaire*®, 07/17/20, overall score 4.8; (B) *Salvia Unplugged*™ So Blue™, 06/05/20, overall score 4.7; (C) *Evolvulus Blue My Mind*®, 07/17/20, overall score 4; (D) *Echinacea Artisan*™ Soft Orange, 07/24/20, overall score 4; (E) *Echinacea Artisan*™ Red Ombre, 07/24/220, overall score 3.9.



Figure 11. *Caryopteris Gold Crest*: (A) 07/24/20 and (B) 09/28/2020, overall score 4.6.



Figure 12. Foliage perennials: (A) *Colocasia*: Maximus Gigante, 07/06/20, overall score 4.7; (B) Black Sapphire Gecko, 07/06/20, overall score 4.7; (C) Heart of the Jungle™, 07/06/20, overall score 4.3; (D) Coffee Cups, 07/06/20, overall score 4.2; (E) *Artemisia Makana*™, Silver, 07/24/20, overall score 4.4; (F) *Sedum* ‘Peach Pearls’, 07/24/20, overall score 4.3.



Figure 13. *Phlox* highlights: (A) Luminary™ ‘Ultraviolet’, 07/17/20, overall score 4.1; (B) Super Ka-Pow™ Fuchsia, 07/17/20, overall score 4.

Edible Crops

Unlike the previously mentioned strawberries that were included in the hanging basket section, there were several edible crops trialed in ground. *Capsicum* Peppi-Grande Red and Armageddon performed well throughout the trial and produced plentiful peppers. Both peppers continued producing into the fall. Peppi-

Grande Red had little to no heat but was full-flavored, while Armageddon was extremely hot and more compact. *Cucurbita* Autumn Frost was reminiscent of butternut squash in the shape of a small pumpkin. It had a pleasant, sweet flavor after roasting. Some of the Autumn Frost plants produced squash that resembled the shape of crookneck squash, instead of the characteristic pumpkin shape.

Table 3. Average criteria scoring for 2020 trial entries.

Cultivar	Flowering	Foliage	Landscape impact	Overall score
Solenostomon ColorBlaze® Royale Pineapple Brandy™	N/A	5.0	4.7	4.8
Begonia Surefire® Red	4.9	4.8	4.7	4.8
Cuphea Vermillionaire® - perennial Y1	4.8	4.9	4.7	4.8
Solenostomon Dragon Heart	N/A	4.9	4.7	4.8
Solenostomon ColorBlaze® Royale Apple Brandy™	N/A	5.0	4.4	4.7
Solenostomon FlameThrower™ Sriracha	N/A	5.0	4.4	4.7
Salvia Unplugged™ So Blue™ - perennial Y2	4.7	4.8	4.7	4.7
Scaevola Whirlwind® Blue Improved	4.6	5.0	4.6	4.7
Impatiens Beacon® Bright Red - shade	4.7	4.8	4.7	4.7
Colocasia Maximus Gigante - perennial Y2	N/A	4.5	4.8	4.7
Colocasia Black Sapphire Gecko - perennial Y2	N/A	4.6	4.8	4.7
Ipomoea Sweet Caroline Medusa™ Green	N/A	4.9	4.4	4.7
Impatiens Beacon® Coral - shade	4.7	4.7	4.7	4.7
Celosia Sol™ Gekko Green	4.3	4.9	4.7	4.6
Celosia Sol™ Lizzard Leaf	4.7	4.9	4.4	4.6
Gomphrena Truffula® Pink	4.6	4.8	4.4	4.6
Caryopteris Gold Crest - perennial Y2	N/A	4.6	4.6	4.6
Colocasia Tea Party - perennial Y2	N/A	4.3	4.8	4.6
Ipomoea Sweet Caroline Kiwi	N/A	4.8	4.2	4.5
Helinathus Suncredible® Yellow	4.6	4.7	4.3	4.5
Solenostomon ColorBlaze® Royale Cherry Brandy™	3.2	5.0	4.3	4.5
Artemesia Makana™ Silver - perennial Y1	N/A	4.7	4.2	4.4
Solenostomon FlameThrower™ Cajun Spice	2.3	5.0	4.3	4.4
Cleome Senorita Rosalita®	4.4	4.2	4.4	4.4
Colocasia Heart of the Jungle™ - perennial Y1	N/A	4.6	4.1	4.3
Angelonia Serenita® White	4.7	4.6	4.1	4.3
Sedum 'Peach Pearls' - perennial Y1	5.0	5.0	3.6	4.3
Lantana Luscious® Goldengate™ - perennial Y2	3.9	4.9	4.0	4.3
Angelonia Serena® White	4.4	4.6	4.0	4.2
Colocasia Coffee Cups - perennial Y1	N/A	4.4	3.9	4.2
Begonia Double Up™ White	4.3	4.2	3.9	4.2
Vinca Valiant™ Burgundy	4.1	4.6	4.0	4.2
Salvia White Flame - perennial Y1	4.3	4.2	3.9	4.1
Vinca Valiant™ Lilac	4.0	4.7	3.9	4.1
Celosia First Flame™ Purple	4.6	3.6	4.2	4.1
Angelonia Serenita® Pink	4.5	4.5	3.8	4.1
Begonia Double Up™ Red	4.4	4.1	3.7	4.1
Vinca Tattoo™ Black Cherry - basket	4.4	4.1	3.9	4.1
Vinca Tattoo™ American Pie Mixture - basket	4.4	4.1	3.8	4.1
Phlox Luminary™ 'Ultraviolet' - perennial Y1	3.8	4.4	3.9	4.1
Vinca Valiant™ Punch	3.9	4.6	3.9	4.1
Evolvulus Blue My Mind® - perennial Y1	4.0	4.0	4.1	4.0
Phlox Super Ka-Pow™ Fuchsia - perennial Y1	4.1	4.4	3.8	4.0
Echinacea Artisan™ Soft Orange - perennial Y1	4.4	4.4	3.7	4.0
Lantana Lucky™ Peach - perennial Y2	3.6	4.8	3.7	4.0
Vinca Valiant™ Magenta	4.0	4.4	3.8	4.0
Angelonia Serena® Purple Improved	4.4	4.2	3.8	4.0
Celosia First Flame™ Red	4.2	3.7	4.3	4.0
Phlox Super Ka-Pow™ Pink - perennial Y1	3.9	4.7	3.5	4.0
Vinca Tattoo™ Tangerine - basket	4.3	4.0	3.8	4.0
Angelonia Serena® Blue Improved	4.1	4.4	3.7	4.0
Petunia Supertunia® Royal Velvet®	3.9	4.1	3.8	4.0
Vinca Tattoo™ Raspberry - basket	4.1	4.1	3.7	3.9
Agastache 'Morello' - perennial Y1	3.7	4.4	3.6	3.9
Zinnia Double Zahara™ Bright Orange	4.0	3.9	3.7	3.9
Vinca Valiant™ Apricot Improved	4.1	4.2	3.7	3.9
Zinnia Double Zahara™ Yellow Improved	4.1	3.7	3.8	3.9
Cucurbita Autumn Frost - vegetable	3.5	3.8	3.8	3.9
Capsicum PeppiGrande Red - vegetable	4.3	4.1	3.7	3.9
Petunia Supertunia® Mini Vista™ Bubblegum®	3.8	4.0	3.8	3.9
Echinacea Artisan™ Red Ombre - perennial Y1	4.4	4.4	3.3	3.9
Hibiscus Summerific® Evening Rose - perennial Y2	3.0	4.3	3.8	3.8
Angelonia Serena® Rose	3.9	4.3	3.6	3.8
Phlox Luminary™ 'Opalescence' - perennial Y1	3.6	4.1	3.7	3.8
Vinca Valiant™ Orchid	4.0	4.2	3.6	3.8
Angelonia Serenita® Lavender	4.3	3.9	3.7	3.8
Petunia Supertunia® Mini Vista™ Pink Star	4.1	3.6	3.8	3.8
Vinca Tattoo™ Papaya - basket	4.0	3.9	3.6	3.8

Continued.

Table 3 (continued). Average criteria scoring for 2020 trial entries.

Cultivar	Flowering	Foliage	Landscape impact	Overall score
Zinnia Double Zahara™ Cherry	3.9	3.9	3.6	3.8
Nemesia SunGlow™ Red - basket	3.8	4.2	3.4	3.8
Zinnia Double Zahara™ Salmon	3.9	3.8	3.6	3.8
Perovskia 'Sage Advice' - perennial Y1	4.0	3.4	3.9	3.8
Scaevola Whirlwind® Starlight™	4.1	3.6	3.7	3.8
Petunia Supertunia® Mini Vista™ Indigo Charm	4.0	3.8	3.6	3.8
Salvia Lancelot - perennial Y1	4.0	3.7	3.6	3.8
Marigold Marvel II™ Yellow	4.0	3.4	3.8	3.8
Heuchera Dolce® Wildberry - shade perennial Y2	N/A	3.8	3.7	3.8
Angelonia Serenita® Sky Blue	4.0	3.9	3.7	3.7
Hosta Shadowland® 'Wu-La-La' - shade perennial Y1	2.0	4.7	3.0	3.7
Zinnia Double Zahara™ White	3.7	4.0	3.6	3.7
Phlox Ka-Pow® White - perennial Y1	3.9	4.4	3.1	3.7
Celosia First Flame™ Yellow Improved	3.9	3.7	3.6	3.7
Veronica Moody Blues® Mauve Improved - perennial Y2	3.7	4.1	3.4	3.7
Phlox Gisele® Red	3.9	3.6	3.7	3.7
Verbena Superbena Sparkling® Amethyst Improved - perennial Y2	3.4	4.1	3.6	3.7
Impatiens Beacon® Orange - shade	3.9	3.4	3.7	3.7
Salvia Mirage™ Rose Bicolor - perennial Y1	3.4	4.2	3.3	3.7
Angelonia Serenita® Rose	3.7	4.0	3.6	3.7
Heuchera Dolce® 'Toffee Tart' - shade perennial Y1	N/A	4.3	3.0	3.7
Ruellia Machu® Morado - perennial Y1	2.7	4.9	3.2	3.6
Dianthus Mountain Frost™ Ruby Snow - perennial Y1	3.2	4.4	3.3	3.6
Phlox Super Ka-Pow™ Lavender - perennial Y1	3.3	4.6	3.1	3.6
Salvia Mirage™ Blue - perennial Y1	3.3	4.1	3.4	3.6
Celosia First Flame™ Scarlet	3.9	3.6	3.4	3.6
Phlox Gisele® Light Pink+Eye	3.8	3.4	3.6	3.6
Petunia ColorRush™ White	3.9	3.5	3.4	3.6
Hibiscus Summerific® 'French Vanilla' - perennial Y1	2.5	4.8	3.2	3.6
Marigold Marvel II™ Orange	3.8	3.3	3.6	3.6
Pentas Sunstar™ Red	3.4	3.8	3.6	3.6
Petunia Shock Wave® Denim	3.6	3.7	3.4	3.6
Lobularia Moonlight Knight™	4.0	3.1	3.6	3.6
Begonia Double Up™ Pink	3.6	3.9	3.2	3.6
Phlox Super Ka-Pow™ White - perennial Y1	3.4	4.4	2.8	3.5
Fragaria Berried Treasure® White - basket perennial	3.4	3.6	3.8	3.5
Calibrachoa MiniFamous® Neo Double PlumTastic - basket	3.4	3.7	3.3	3.5
Lobularia White Knight®	3.3	3.8	3.3	3.5
Heliopsis Tuscan Gold™ - perennial Y2	3.1	4.2	3.1	3.5
Pentas Sunstar™ Pink	3.5	3.7	3.3	3.5
Echinacea Sombrero® Summer Solstice - perennial Y2	3.0	4.1	3.4	3.5
Lantana Luscious® Royale Red Zone™ - perennial Y1	3.0	4.2	3.1	3.4
Petunia Bee's Knees	3.7	3.4	3.3	3.4
Sanvitalia Sunbini® Improved	3.2	3.9	3.2	3.4
Leucanthemum Whitecap - perennial Y1	3.0	4.4	2.9	3.4
Lantana Luscious® Royale Cosmo - perennial Y1	3.0	4.1	3.2	3.4
Phlox Opening Act Ultrpink - perennial Y2	3.2	4.0	3.1	3.4
Lavandula Primavera - perennial Y1	2.8	4.2	3.1	3.4
Lobelia Laguna® Sky Blue Improved	4.0	2.9	3.1	3.4
Verbena EnduraScape™ Purple Improved - perennial Y1	3.2	3.5	3.4	3.4
Impatiens Super Elfin® Bright Orange - shade	3.6	3.3	3.2	3.4
Impatiens Beacon® White - shade	3.7	3.3	3.0	3.3
Heliopsis Tuscan Sun - perennial Y2	2.8	4.1	3.1	3.3
Veronica Vespers™ Blue - perennial Y1	N/A	4.7	2.0	3.3
Veronica Venture™ Blue - perennial Y1	N/A	4.6	2.0	3.3
Salvia Purple & Bloom - perennial Y2	4.2	2.8	2.9	3.3
Fragaria Berried Treasure® Pink - basket perennial	3.6	3.2	3.2	3.3
Zinnia Zesty™ Fuchsia	3.4	3.4	3.1	3.3
Hibiscus Summerific® 'Spinderella' - perennial Y1	2.4	4.1	2.9	3.3
Salvia 'Pink Profusion' - perennial Y1	3.1	3.7	3.1	3.3
Dahlia Dalaya® Raspberry	3.4	3.2	3.2	3.3
Verbena Cadet Upright™ Red Improved - perennial Y1	3.0	3.6	3.2	3.3
Begonia Double Delight™ Blush Rose - basket	3.2	3.6	3.1	3.3
Impatiens Beacon® Rose - shade	3.4	3.1	3.2	3.3
Dianthus Mountain Frost™ Ruby Glitter - perennial Y1	2.8	4.3	2.6	3.2
Lobelia Starship™ Scarlet Bronze Leaf - perennial Y1	3.8	3.6	2.9	3.2
Calibrachoa Superbells® Coral Sun - basket	3.1	3.6	2.9	3.2
Phlox Opening Act Pink-a-Dot - perennial Y2	3.3	3.4	3.1	3.2

Continued.

Table 3 (continued). Average criteria scoring for 2020 trial entries.

Cultivar	Flowering	Foliage	Landscape impact	Overall score
Dianthus Coronet™ White - perennial Y1	2.9	3.6	3.1	3.2
Impatiens Beacon® Salmon - shade	3.4	3.1	3.0	3.2
Verbena EnduraScape™ Red Improved - perennial Y1	3.3	3.2	3.2	3.2
Lobelia Starship™ Deep Rose - perennial Y1	2.8	3.9	3.0	3.2
Euryops High Noon™ - perennial Y1	2.7	3.9	2.9	3.2
Pentas Glitterati™ Purple Star	3.9	3.0	3.0	3.2
Verbascum 'Honey Dijon' - perennial Y1	2.0	4.1	2.6	3.1
Impatiens Super Elfin® XP White - shade	4.0	3.4	2.6	3.1
Clematis Stand by Me - perennial Y2	3.5	3.2	2.7	3.1
Vinca Tattoo™ Blueberry - basket	3.4	3.3	2.7	3.1
Capsicum Armageddon - vegetable	4.0	3.2	3.0	3.1
Fragaria Berried Treasure® Red - basket perennial	3.7	2.7	3.1	3.1
Petunia Easy Wave® Silver	3.3	3.0	2.9	3.1
Impatiens Beacon® Violet Shades - shade	3.2	3.1	2.8	3.0
Eupatorium Euphoria™ Ruby - perennial Y2	3.3	3.1	2.7	3.0
Hemerocallis Rainbow Rhythm® 'King of the Ages' - perennial Y1	3.7	3.2	2.8	3.0
Pentas Glitterati™ Red Star	3.3	3.2	2.7	3.0
Petunia Easy Wave® Violet	2.9	3.1	2.9	3.0
Leucanthemum Madonna - perennial Y2	3.0	3.6	2.7	2.9
Veronica 'Aspire' - perennial Y1	3.7	3.6	2.1	2.9
Zinnia Zesty™ Purple	2.9	3.0	2.9	2.9
Osteospermum Bright Lights® Red	2.6	3.4	2.8	2.9
Heucherella 'Peach Tea' - shade perennial Y1	N/A	3.8	2.1	2.9
Veronica Magic Show® Purple Illusion - perennial Y2	1.0	4.2	2.1	2.9
Gaillardia Heat it Up™ Scarlet - perennial Y2	3.1	2.8	2.8	2.9
Petunia Shock Wave® Purple Tie Dye	2.9	3.1	2.7	2.9
Salvia Color Spires® 'Back to the Fuchsia' - perennial Y1	2.1	3.9	2.7	2.9
Lobelia Starship™ Blue - perennial Y1	3.0	3.2	2.8	2.9
Petunia Shock Wave® Coral Crush	2.8	3.0	2.8	2.9
Greens SimplySalad® Pro San Mixture - basket vegetable	N/A	2.8	2.9	2.9
Begonia Double Delight™ Primrose - basket	2.8	3.6	2.4	2.9
Gaillardia Heat it Up™ Yellow - perennial Y2	2.8	2.7	3.1	2.9
Achillea Firefly Sunshine - perennial Y2	2.8	3.0	2.8	2.9
Origanum 'Drops of Jupiter' - perennial Y1	1.0	3.2	2.8	2.9
Dianthus Mountain Frost™ Red Garnet - perennial Y2	2.2	3.9	2.4	2.8
Impatiens Infinity® Blushing Crimson Improved - shade	2.6	3.2	2.7	2.8
Sedum Rock N' Grow® Boogie Woogie - perennial Y2	2.6	3.1	2.7	2.8
Impatiens Infinity® Light Purple Improved - shade	2.6	3.0	2.7	2.8
Solanum Asian Delite - vegetable	3.5	2.9	2.7	2.8
Hypoestes Hippo® Red - shade	2.0	3.1	2.4	2.8
Salvia Rockin'® Fuchsia - perennial - Y1	2.7	2.9	2.6	2.7
Petunia Headliner™ Electric Purple Sky - basket	3.0	2.6	2.6	2.7
Achillea Firefly Peach Sky - perennial Y2	3.1	2.7	2.6	2.7
Sedum Rock N' Grow® Yellow Brick Road - perennial Y2	4.0	2.8	2.3	2.7
Impatiens Infinity® Orange Improved - shade	N/A	2.8	2.7	2.7
Greens SimplySalad® Pro Tatu Mixture - basket vegetable	2.0	2.8	2.9	2.7
Viola Quicktime™ Yellow Violet Jump Up - shade	2.7	2.7	2.7	2.7
Nepeta Whispurr™ Blue - perennial Y1	2.7	2.4	2.8	2.6
Dianthus Rockin'™ Purple - perennial Y2	3.2	1.9	2.7	2.6
Hemerocallis Rainbow Rhythm® 'Lake of Fire' - perennial Y1	2.3	2.9	2.4	2.6
Verbascum 'Lavender Lass' - perennial Y1	1.4	3.8	2.1	2.6
Salvia Rockin'® Blue Suede Shoes™ - perennial Y1	2.8	2.4	2.4	2.5
Penstemon Quartz® Red - perennial Y2	1.7	3.4	2.4	2.5
Calibrachoa Bumble Bee Orange	2.8	2.5	2.4	2.5
Allium Serendipity - perennial Y2	2.0	3.0	2.2	2.5
Dianthus Rockin'™ Rose - perennial Y2	2.6	1.9	2.9	2.5
Petunia Headliner™ Dark Violet Picotee 21 - basket	2.6	2.6	2.3	2.5
Achillea Milly Rock™ Rose - perennial Y2	2.2	2.9	2.2	2.5
Petunia Easy Wave® Rose Fusion	2.8	2.2	2.3	2.4
Salvia New Dimension™ Blue - perennial Y2	2.6	2.6	2.2	2.4
Nepeta 'Cat's Pajamas' - perennial Y1	2.2	2.8	2.2	2.4
Phlox Spring Bling™ 'Ruby Riot' - perennial Y1	N/A	2.7	2.1	2.4
Dianthus Rockin'™ Pink Magic - perennial Y2	2.4	2.4	2.3	2.4
Lobelia Starship™ Burgundy - perennial Y1	2.3	2.6	2.1	2.3
Verbena Superbena Sparkling® Rosé - perennial Y2	2.7	2.2	2.2	2.3
Nepeta Whispurr™ Pink - perennial Y1	1.8	2.7	2.3	2.3
Nemesia SunGlow™ Purple Bicolor - basket	2.0	2.6	2.3	2.3
Dianthus Rockin'™ Red - perennial Y2	2.7	1.9	2.2	2.3

Continued.

Table 3 (continued). Average criteria scoring for 2020 trial entries.

Cultivar	Flowering	Foliage	Landscape impact	Overall score
Salvia Salvatore Blue - perennial Y2	2.3	2.2	2.3	2.3
Nepeta Blue Prelude - perennial Y2	2.0	2.3	2.3	2.2
Sedum Prima Angelina - perennial Y1	N/A	2.2	2.0	2.1
Phlox Spring Bling™ 'Pink Sparkles' - perennial Y1	1.8	2.3	2.0	2.1
Digitalis Artic Fox Rose - shade perennial Y2	1.9	2.5	1.8	2.1
Lavandula Annet - perennial Y2	1.6	2.2	1.8	1.9
Armeria Dreameria® Dream Clouds - perennial Y1	1.7	2.3	1.8	1.9
Achillea Milly Rock™ Yellow - perennial Y1	1.6	1.8	1.7	1.7
Salvia New Dimension™ Rose Improved - perennial Y2	2.0	1.8	1.4	1.7
Delphinium Dasante Blue - perennial Y1	1.0	1.8	1.5	1.6
Achillea Milly Rock™ Red - perennial Y2	1.5	1.6	1.6	1.6

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