2020 Cultivar Trials of Bedding Plants

Horticulture Research and Demonstration Gardens
Department of Plant Sciences

Agricultural Experiment Station
North Dakota State University
Fargo, ND
# 2020 Cultivar Trials of Bedding Plants

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*Zinnias in September*
2020 Cultivar Trials of Bedding Plants

Barbara A. Laschkewitsch, M.S.
Trial Garden Coordinator

Introduction

Performance trials were conducted on over 200 bedding plants in the Horticultural Demonstration and Research plots, part of the Department of Plant Sciences at North Dakota State University.

The horticulture gardens are located on the corner of 12th Ave. N and 18 St. N, on the west edge of the NDSU campus. They are for education, research and display purposes and are open to the public, free of charge, throughout the growing season. Guided tours are also available and contact information for the gardens is located on page 8.

Garden Areas

Bedding Plant Trials: These gardens are located directly off the small parking area on the east side of the gardens. This is an official display garden of All-America Selections (AAS); more information on this organization is on page 6.

Daylilies: Almost 2000 daylily cultivars are located in these gardens on the western edge of the garden area. An official garden of the American Daylily Society, this was the ‘First Public American Hemerocallis Society Historic Daylily Display Garden’ and the majority of the cultivars are historic or registered with the society prior to 1990.

Meadow Garden: This area consists of grasses and forbs native to the prairies of the upper Midwest. Little bluestem, prairie drop seed, needle grass, echinacea, asters and prairie smoke are just some of the plants in this area.
**Other garden areas:** (cont.)

**Perennial Ornamental Grasses:** Both native and non-native perennial grasses are located here.

![Perennial Ornamental Grasses](image)

**Xeric Planting:** This area consists of plants that are low maintenance and require less water once established. *Perovskia* (Russian Sage), *Echinacea*, *Nepeta* and *Baptisia* are some of the genera represented.

![Xeric Planting](image)

**Sun/Shade perennials:** This area receives both sun and shade so it includes perennials that are tolerant of different light conditions. Some genera here, such as *hosta* cultivars, are also planted in the full shade area for comparison.

![Sun/Shade perennials](image)
**Other garden areas**: (cont.)

**Shade planting**: This is a dry, shady area located under a grove of poplar and pine trees. There are mostly perennials here but there is also a small area for shade tolerant annuals.

![Shade planting image](image)

**Accessibility Garden**: These raised beds are designed for gardeners who may be wheelchair bound or otherwise unable to bend or garden in ground level beds. This area is located directly off the parking area adjacent to 18th street. Different types of annuals are planted here.

![Accessibility Garden image](image)

The horticulture gardens also include research areas for pollinator plants, hardiness of perennials provided by Darwin Perennials and plants needed for classes taught in herbaceous ornamental plants.

**Bedding Plant Trials Culture**

The plants for the bedding plant trials were seeded in the horticulture and forestry greenhouse on the NDSU campus from January through April. Specific dates can be found in the report table on pages 9-59. When at the proper stage, seedlings were transplanted into cell packs containing a peat-based growing medium and finished in the greenhouses.

‘Main Street Beale Street’ Coleus and ‘FloriGlory Diana’ Cuphea were received as rooted cuttings on March 25 and immediately potted into cell packs with the same peat-based growing medium used for the seed started cultivars.

Six to 12 plants of each cultivar were planted into the beds on June 1 and 2, 2020.

Hand weeding was done on a weekly basis but Razor® Pro¹ (glyphosate) was used for spot treating perennial weeds.

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¹ 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 ND Agriculture Experiment Station is implied.
Miracle-Gro® Liquafeed 12-4-8 was foliarly applied June 23, July 9 and July 23. Water was applied through drip irrigation (full sun beds) and overhead irrigation (shade beds).

**Weather**

Fargo temperatures for June-August were warmer than the 30 year average and precipitation was higher in July and August. (Table 1).

Table 1. 2020 and 1981-2010 June-August Average Temperature and Precipitation for Fargo, ND. ²

<table>
<thead>
<tr>
<th>Average Temperature (°F)</th>
<th>Precipitation (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>71</td>
</tr>
<tr>
<td>July</td>
<td>74</td>
</tr>
<tr>
<td>August</td>
<td>70</td>
</tr>
</tbody>
</table>

**Problems**

There were no major problems in 2020. Liquid Fence® was applied early in the season to discourage jackrabbit browsing.

**Events**

Due to the coronavirus pandemic, no events were held in the gardens but they did remain open to the public.

**All-America Selections**

The NDSU trial garden is an official display garden of All-America Selections (AAS). AAS was founded in 1932 as a way for home gardeners to learn about new and improved varieties of flowers and vegetables. The red, white and blue AAS logo (above) found on seed packets, in catalogs, and in garden articles usually indicates superior cultivars that have been tested in a variety of locations across the United States and Canada. At NDSU, winning varieties are grown in both the bedding plant trials and a separate garden dedicated solely to AAS winners.

² Temperature and precipitation data are from NDAWN and the National Climatic Data Center.
All-America Selections (cont.)
These were the AAS winners planted at NDSU in 2020:

2016 winners:
Ornamental Pepper ‘Black Hawk’
Salvia ‘Summer Jewel Lavender’

2017 winners:
Celosia ‘Asian Garden’
Dianthus ‘Supra Pink’
Petunia ‘Evening Scentsation’
Penstemon ‘Twizzle Purple’
Vinca ‘Mega Bloom Orchid Halo’
Vinca ‘Mega Bloom Pink Halo’
Zinnia ‘Profusion Red’

2018 winners:
Canna ‘South Pacific Orange’
Cuphea ‘FloriGlory Diana’
Gypsophila ‘Gypsy White Improved’
Marigold ‘Super Hero Spy’
Ornamental Pepper ‘Onyx Red’
Zinnia ‘Queenly Lime Orange’

2019 winners:
Marigold ‘Big Duck Gold’
Marigold ‘Big Duck Orange’
Marigold ‘Big Duck Yellow’

2019 winners: (cont.)
Marigold ‘Garuda Deep Gold’
Nasturtium ‘Baby Rose’
Petunia ‘Wave Camine Velour’
Vinca ‘Mega Bloom Polka Dot’
Zinnia ‘Holi Scarlet’

2020 winner:
Coleus ‘Main Street Beale Street’

Evaluations

Plants were evaluated July 28 and Aug. 31. Measurements for average height and spread were taken and plants were rated on a scale of 1 (poor) to 5 (excellent) in 3 areas: bloom, uniformity and vigor. Stars ( ★ ) on the bottom right corners of pictures in the report indicate top performers during that evaluation time. The following cultivars received 5’s in each of the 3 categories for both evaluation times and are considered superior performers. Detailed measurements and notes for each cultivar can be found on pages 9-59.

2020 Top Performers (listed alphabetically by genus):

Angelonia ‘Serena Blue’
Angelonia ‘Serena Purple’
Canna ‘Canna Bronce Orange’
Canna ‘South Pacific Orange’
Canna ‘South Pacific Scarlet’
Capsicum (Ornamental Pepper) ‘Black Hawk’
Catharanthus (Vinca) ‘Mega Bloom Orchid Halo’
Catharanthus (Vinca) ‘Mega Bloom Pink Halo’
Celosia ‘Arrabona Red’
Celosia ‘Asian Garden’
Celosia ‘Chinatown’
Celosia ‘First Flame Yellow’
Celosia ‘Prestige Scarlet’
Cleome ‘Sparkler Blush’
Cleome ‘Sparkler Rose’
Cuphea ‘Sriracha Rose’
Gaura ‘Sparkle White’
Gomphrena ‘Fireworks’
Gomphrena ‘Las Vegas Mix’
Gomphrena ‘Strawberry Fields’
Hibiscus ‘Mahogany Splendor’
Lobularia ‘Snow Crystals’
Melinis ‘Savannah’
Petunia ‘Easy Wave Burgundy Velour’
Petunia ‘Easy Wave Lavender Sky Blue’
Petunia ‘Easy Wave Pink Shades’
Petunia ‘Evening Scentsation’
Petunia ‘Shock Wave Coconut’
Petunia ‘Shock Wave Pink Shades’
Petunia ‘Shock Wave Pink Vein’
Petunia ‘Tidal Wave Red Velour’
Petunia ‘Tidal Wave Silver’
Petunia ‘Wave Carmine Velour’
Salvia farinacea ‘Fairy Queen’
Salvia farinacea ‘Victoria’
Salvia splendens ‘Vista Purple’
Salvia splendens ‘Vista Red’
Spilanthes ‘Lemon Drops’
Tagetes (Marigold) ‘Big Duck Gold’
Tagetes (Marigold) ‘Big Duck Orange’
Tagetes (Marigold) ‘Big Duck Yellow’
Tagetes (Marigold) ‘Park’s Whopper Mix’
Verbena bonariensis
Zinnia ‘Holi Scarlet’
Zinnia ‘Okayama Mix’
Zinnia ‘Pinca’
Zinnia ‘Uproar Rose’
Zinnia ‘Profusion Red’
Zinnia ‘Zinderella Lilac’
Zinnia ‘Zinderella Orange’
Zinnia ‘Zinderella Peach’
Zinnia ‘Zinderella Purple’
Zinnia ‘Zinderella Red’

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Acknowledgements

‘Thank you’ to supporters of the 2020 gardens including All-America Selections and Ball Horticultural Company. We are grateful for the support of these companies and hope results from our efforts are beneficial in their research for new and improved cultivars.

I’d also like to extend a special ‘thank you’ to Esther McGinnis, coordinator of the Master Gardener (MG) program, and the MG volunteers who provided over 200 hours of service from May through October. Their help, from spring clean-up to planting the trial gardens to summer maintenance and fall clean-up, is greatly appreciated.

Contact Information

For more information about the Horticultural Demonstration and Research plots at North Dakota State University, visit www.ag.ndsu.edu/plantsciences/research/gardens or contact:

Barb Laschkewitsch
Department of Plant Sciences
NDSU Dept. 7670, PO Box 6050
Fargo, ND  58105-6050

Phone: 701-231-7484
E-mail: barbara.laschkewitsc@ndsu.edu

September 2020
Did well all season but was more floriferous and uniform in August. Agastache seed was started in the greenhouse on February 25, 2020.

Very nice plants in August with good bloom and size uniformity. Very similar in growth to Agastache 'Arizona Sandstone'.

Nice bloom and size uniformity all summer. Ageratum seeds were started in the greenhouse on March 23, 2020.

There wasn't much of a color mix here-only blue flowers. There was also some differences in size and bloom time.
Amaranthus caudatus Love-Lies-Bleeding
seed source: Burpee

July 28 Height: 28" Spread: 30"
Aug. 31 Height: to 27" Spread: to 30"

This old fashioned Amaranth gets quite large and is better suited for a larger garden. It did well most of the summer but started declining by the end of August. Seed for Amaranth was started April 6, 2020.

Amaranthus caudatus 'Coral Fountain'
seed source: Johnny's Selected Seeds

July 28 Height: 16-38" Spread: 21-36"
Aug. 31 Height: 18-35" Spread: 34-36"

This was very vigorous but not very uniform in size. It declined over the course of the summer with foliage turning yellow and red by September.

Amaranthus caudatus 'Pony Tails'
seed source: Thompson and Morgan

July 28 Height: 31-36" Spread: 36"+
Aug. 31 Height: to 28" Spread: to 36"

Similar to other Amaranthus, this was very vigorous early but showed decline by September.

Amaranthus cruentus 'Hopi Red Dye'
seed source: Johnny's Selected Seeds

July 28 Height: 26-33" Spread: 36"+
*Aug. 31 Height: to 36" Spread: to 40"

This Amaranthus was quite striking in August with the deep burgundy plumes and reddish foliage.
Angelonia 'Serena Blue' was a top performer all summer with good bloom, vigor and size uniformity. Angelonia seed was started in the greenhouse on February 25, 2020.

Angelonia 'Serena Purple' was also a top performer all summer with good vigor, bloom and size uniformity.

Angelonia 'Serena Rose' had some differences in size but bloom was nice all summer.

'Black Prince' was not very uniform in size. There was a decline in bloom through August but it was better in September. Snapdragon seeds were started in the greenhouse on April 1, 2020.
This cultivar has a nice mix of colors. It bloomed fairly consistently all summer but looked best in September.

This mix of colors lacked size uniformity. Like the other snapdragons, bloom was best once the weather cooled in September.

This snapdragon has ruffled, butterfly shaped flowers. Nice mix of colors but the taller stems were falling over.

‘Rocket Golden’ has a nice, bright yellow color. There were some size differences and bloom declined during the heat of the summer.

This cultivar has a nice mix of colors. It bloomed fairly consistently all summer but looked best in September.
July 28  Height: 5-8"  Spread: 5-8"

Aug. 31  Height: 6-8"  Spread: 10-12"

Short snapdragon with ruffled, butterfly shaped flowers. There wasn’t much of a color mix here and bloom was poor in August.

Calendula officinalis 'Alpha'

July 28  Height: 15-21"  Spread: 20-24"

Aug. 31  Height: 20-25"  Spread: 28-30"

All the Calendula looked much better for the July evaluation than the August one. Seeds for these were started in the greenhouse on April 6, 2020.

Calendula officinalis 'Calexis Orange'

July 28  Height: 10-13"  Spread: 11-16"

Aug. 31  Height: 12-14"  Spread: 12-15"

Doing well early in the summer but decline in bloom by the end of August.

Calendula officinalis 'Orange Flash'

July 28  Height: 15-17"  Spread: 18-20"

Aug. 31  Height: 17-18"  Spread: 22-25"

One of the top performing Calendula in July with good bloom, vigor and size uniformity. It was past its peak bloom by the August evaluation.
Just starting to bloom in July but had good vigor and size uniformity. The cannas were started from seed in the greenhouse on February 14 after soaking in warm water for a day.

**Canna x generalis 'Cannova® Bronze Orange'**

*July 28* Height: 26-28" Spread: 18-20"

*Aug. 31* Height: 40-42" Spread: 22-24"

This mix of orange and gold flowers looked good most of the summer but had very few blooms by the end of August.

**Canna x generalis 'South Pacific™ Orange'**

*July 28* Height: 24-26" Spread: 18-20"

*Aug. 31* Height: 36-38" Spread: 20-24"

2018 All-America Selections (AAS) Flower Winner. Was a bit slow to bloom but plants were vigorous and healthy all season.

**Canna x generalis 'South Pacific™ Scarlet'**

*July 28* Height: 22-30" Spread: 20-24"

*Aug. 31* Height: 40-42" Spread: 22-24"

2013 All-America Selections (AAS) Flower Winner. This canna had the best bloom of the cannas in July and continued to do well all season.
2016 All-America Selections (AAS) Flower Winner. Did well all season with nice uniformity and vigor. The numerous black peppers slowly turn red. Ornamental peppers were started in the greenhouse on Feb. 18, 2020.

**Capsicum annuum (Ornamental Pepper) 'Black Pearl'**

*July 28* Height: 14-16" Spread: 14-16"

*Aug. 31* Height: 18-20" Spread: 18-20"

Good vigor and size uniformity. Deep black peppers aren't very showy but deep purple/black foliage color is interesting.

**Capsicum annuum (Ornamental Pepper) 'Onyx Red'**

*July 28* Height: 6-11" Spread: 8-11"

*Aug. 31* Height: 12-14" Spread: 9-14"

2018 All-America Selections (AAS) Flower Winner. Nice, deep purple-black foliage on these peppers. There were some size differences all season.

**Catharanthus roseus (Vinca) 'Cora Cascade Polka Dot'**

*July 28* Height: 5-7" Spread: 16-17"

*Aug. 31* Height: 8-9" Spread: 22-23"

This did well all season but looked especially good in August and September with good vigor, bloom and size uniformity. All vinca were seeded in the greenhouse on February 25, 2020.
**Catharanthus roseus (Vinca) 'Cora Cascade Strawberry Hybrid'**

*seed source: Park Seed*

**July 28** Height: 4-6" Spread: 18-20"

*Aug. 31* Height: 3-5" Spread: 34-36"

Good bloom, vigor and uniformity—especially in the second half of the summer.

**Catharanthus roseus (Vinca) 'Cora XDR Mix'**

*seed source: Park Seed*

**July 28** Height: 8-9" Spread: 12-14"

*Aug. 31* Height: 13-15" Spread: 22-24"

Mix of white, rose and pink that was very nice in August and September with lots of bloom.

**Catharanthus roseus (Vinca) 'Jaio Dark Red'**

*seed source: Park Seed*

**July 28** Height: 7-9" Spread: 7-10"

*Aug. 31* Height: 14-16" Spread: 15-20"

Another vinca that did well all summer but was especially nice in August and September.

**Catharanthus roseus (Vinca) 'Jams 'N Jellies American Pie Mix'**

*seed source: Park Seed*

**July 28** Height: 6-9" Spread: 7-11"

*Aug. 31* Height: 8-10" Spread: 12-19"

Mix of red, white and deep purple flowers that was floriferous but not uniform in size.
Catharanthus roseus (Vinca) 'Jams 'N Jellies Blackberry'

*Indicates a top performer during that evaluation time.

July 28
Height: 7-8” Spread: 7-8”

Aug. 31
Height: 9-10” Spread: 15-16”

This looked nice all summer but did not bloom as well as 'Jams 'N Jellies Blueberry'.

Catharanthus roseus (Vinca) 'Jams N Jellies Blueberry'

July 28
Height: 8-9” Spread: 9-10”

*Aug. 31
Height: 9-10” Spread: 15-16”

Nice all summer but looked the best in August and September. Bloomed better than 'Jams N Jellies Blackberry'.

Catharanthus roseus (Vinca) 'Mega Bloom Orchid Halo'

July 28
Height: 9-10” Spread: 13-15”

*Aug. 31
Height: 15-16” Spread: 23-24”

2017 All-America Selections (AAS) Flower Winner. This was a top performer all summer with good bloom, vigor and size uniformity.

Catharanthus roseus (Vinca) 'Mega Bloom Pink Halo'

July 28
Height: 8-9” Spread: 12-16”

*Aug. 31
Height: 15-16” Spread: 23-26”

2017 All-America Selections (AAS) Flower Winner. This was also a top performer all summer with good bloom, vigor and size uniformity.
Catharanthus roseus (Vinca) 'Mega Bloom Polka Dot'

2019 All-America Selections (AAS) Flower Winner. Another top performing vinca with good bloom, vigor and size uniformity all season.

Catharanthus roseus (Vinca) 'Tattoo Black Cherry'

Interesting cherry color with good bloom and vigor, especially the second half of the season.

Catharanthus roseus (Vinca) 'Tattoo Tangerine'

This Vinca also had a unique color with better plant performance later in the season.

Celosia argentea (cristata group) 'Prestige Scarlet'

A top performing celosia all season with good bloom, vigor and size uniformity. All celosia were seeded in the greenhouse on March 25, 2020.
Celosia 'Arrabona Red' is a consistently good performer in the trials and 2020 was no exception. Interesting color combination of red flowers with the burgundy foliage. Good performer all season. This looked very nice through July but the stems started falling over in August and crowded the 'First Flame Red' celosia that was next to it. There were some size differences early with this celosia but it looked especially nice into August and September.
**Celosia argentea (plumosa group) 'Pampas Plume'**

*seed source: Johnny's Selected Seeds*

July 28  
Height: 27-36"  
Spread: 22-25"

Aug. 31  
Height: to 40"  
Spread: to 36"

I gave this higher marks in July than August due to how big it was getting later in the season. Bloom was good all year but some stems were falling over in August.

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Bloom and vigor were good early but size wasn't uniform. *Celosia 'Eternity Improved'* was falling over on top of it in August which reduced its visibility and vigor.

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**Celosia argentea (plumosa group) 'First Flame Red'**

*seed source: Ball Seed*

July 28  
Height: 15-16"  
Spread: 13-16"

Aug. 31  
Height: 14-16"  
Spread: 16-22"

July 28  
Height: 15-16"  
Spread: 14-17"

Aug. 31  
Height: 15-17"  
Spread: 17-22"

This got good marks in July for vigor, uniformity and bloom. I marked it down a bit in August due to some size differences but bloom was still good.

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**Celosia argentea (plumosa group) 'First Flame Yellow'**

*seed source: Ball Seed*

July 28  
Height: 15-16"  
Spread: 13-16"

Aug. 31  
Height: 14-16"  
Spread: 16-22"

I gave this high marks both evaluation times for its vigor, uniformity and bloom but flowers were looking a little dull and dirty in August.

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**Celosia argentea (plumosa group) 'Fresh Look Red'**

*seed source: Burpee*

July 28  
Height: 15-16"  
Spread: 13-16"

Aug. 31  
Height: 14-16"  
Spread: 16-22"

I gave this higher marks in July for vigor, uniformity and bloom. I marked it down a bit in August due to some size differences but bloom was still good.

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Bloom and vigor were good early but size wasn't uniform. *Celosia 'Eternity Improved'* was falling over on top of it in August which reduced its visibility and vigor.
2017 All-America Selections (AAS) Flower Winner. This has performed well every year that it’s been in the trials and 2020 was no exception. This also attracts many painted lady butterflies.

**Celosia argentea (spicata group) ‘Asian Garden’**
*seed source: All-America Selections*

*July 28* Height: 19-24” Spread: 20-22”

*Aug. 31* Height: 26-28” Spread: 28-30”

This was very vigorous but there were size differences all season. It was also a bit slower to bloom than Celosia ‘Asian Garden’

**Centaurea cyanus (Bachelor’s Button) ‘Blue Boy’**
*seed source: Burpee*

*July 28* Height: 18-26” Spread: 12-14”

*Aug. 31* Height: 25-26” Spread: 20-22”

Centaura ‘Blue Boy’ had better bloom in July than August but overall was a good performer all season. Seed for Centaura was started April 14, 2020.

**Cleome hassleriana ‘Sparkler Blush’**
*seed source: Park Seed*

*July 28* Height: 21” Spread: 22”

*Aug. 31* Height: 30-32” Spread: 30-33”

Although there were only 2 of these due to poor seed germination, they did well all season with good vigor, bloom and uniformity. Seed for Cleome was started in the greenhouse on February 25, 2020.
These did well all season with good bloom, vigor and size uniformity.

_Cosmidium burridgeanum 'Phillipine'_

*seed source: Burpee*

July 28 Height: 9-15" Spread: 10-15"
Aug. 31 Height: 13-15" Spread: 13-14"

This plant with daisy type flowers was done blooming by late August. These were started in the greenhouse on February 25, 2020 but that was too early; mid to late March would be better.

_Cosmos bipinnatus 'Apricot Lemonade'_

*seed source: Park Seed*

July 28 Height: 23-27" Spread: 26-28"
Aug. 31 Height: 32-35" Spread: to 36"

This was a vigorous grower but never had many blooms. Blooming was also not uniform. All Cosmos seeds were started April 14, 2020.

_Cosmos bipinnatus 'Capriola'_

*seed source: Park Seed*

July 28 Height: 20-21" Spread: 20-22"
Aug. 31 Height: 32-35" Spread: to 36"

This had better bloom than Cosmos 'Apricot Lemonade' but wasn't uniform in blooming between plants. Stems were also falling over and breaking at the base.
Another Cosmos with vigorous growth but not many blooms. There were only a few blooms for the July evaluation; bloom was better in August.

Cosmos bipinnatus 'Xenia'
seed source: Johnny's Selected Seeds

One of the better blooming Cosmos bipinnatus in July but it wasn't blooming as well by the end of August.

Cosmos sulphureus 'Cosmic Red'
seed source: Park Seed

This did well early with good bloom, vigor and uniformity. By the end of August, however, bloom had greatly declined.

Cosmos sulphureus 'Cosmic Yellow'
seed source: Park Seed

Bloom was good in July but there were size differences between the plants. Bloom had declined by the end of August.
Cuphea hybrid 'FloriGlory® Diana'

2018 All-America Selections (AAS) Ornamental Vegetative Winner. Nice uniformity and bloom all season but was especially nice in August. Rooted cuttings were received on March 25, 2020.

Cuphea llavea 'Sriracha Rose'

Nice all season with good bloom, uniformity and vigor. Seeds for this Cuphea were started in the greenhouse on April 1, 2020.

Dahlia coccinea 'Victoriana Mix'

Lots of bloom on these but there were some size differences. Seeds for this were started February 25, 2020.

Dahlia hybrid 'Summer Tango'

These ball-type Dahlias are great for cut flowers. The plants were vigorous but there were some size differences. Tubers were planted directly into the ground on June 3, 2020.
Dahlia variabilis ‘Giant Hybrid Mix’

seed source: Johnny’s Selected Seeds

July 28 Height: 9-36” Spread: 9-19”

Aug. 31 Height: to 42” Spread: 24-30”

These tall Dahlias were great for cutting but needed some space. They looked best later in the season. Seeds for these were started February 25, 2020.

Dianthus amurensis ‘Siberian Blues’

seed source: Park Seed

July 28 Height: 5-9” Spread: 6-12”

Aug. 31 Height: 3-8” Spread: 10-13”

None of the Dianthus did well this summer, possibly due to the heat and humidity we had. These were never very vigorous and bloom wasn’t that great. The Dianthus were started in the greenhouse on March 23, 2020.

Dianthus x barbatus interspecific ‘Rockin’™ Purple’

seed source: Park Seed

July 28 Height: 10-14” Spread: 10-16”

Aug. 31 Height: 6-10” Spread: 9-12”

This was one of the nicest Dianthus all season but it still didn’t perform as well as it has in the past.

Dianthus x barbatus interspecific ‘Rockin’™ Red’

seed source: Park Seed

July 28 Height: 6-11” Spread: 3-6”

Aug. 31 Height: 3-8” Spread: 3-7”

Bloom was better in July than August. It lacked vigor all season.
Dianthus chinensis 'Corona Strawberry'

**seed source:** Park Seed

![July 28 Height: 3-5" Spread: 3-5"](image1.png)

![Aug. 31 Height: 3-5" Spread: 3-5"](image2.png)

One of the poorest performing Dianthus this season with low vigor and few flowers.

**Echinacea**

was started in the greenhouse on January 8, 2020.

Similar to 'Cheyenne Spirit', this was just starting to bloom by the end of July and was doing much better in August. Vigor was good but there were some differences in sizes. *Echinacea* was started in the greenhouse on January 8, 2020.

**2017 All-America Selections (AAS) Flower Winner.** This did not perform well this year. Bloom was better in July than August.

Dianthus interspecific 'Supra Pink'

**seed source:** All-America Selections

![July 28 Height: 6-8" Spread: 6-10"](image3.png)

![Aug. 31 Height: 4-6" Spread: 3-6"](image4.png)

**Echinacea purpurea 'Cheyenne Spirit'

**seed source:** All-America Selections

![July 28 Height: 7-9" Spread: 5-11"](image5.png)

![Aug. 31 Height: 7-17" Spread: 6-18"](image6.png)

This was just starting to bloom by the end of July and bloom was much better in August. Vigor was good but there were some differences in sizes. *Echinacea* was started in the greenhouse on January 8, 2020.

Echinacea purpurea 'Mellow Yellows'

**seed source:** Park Seed

![July 28 Height: 7-15" Spread: 5-9"](image7.png)

![Aug. 31 Height: 13-25" Spread: 9-13"](image8.png)

Similar to 'Cheyenne Spirit', this was just starting to bloom by the end of July and was doing much better in August. There were also some size differences with these plants.
Plants weren't very vigorous and bloom wasn't uniform. All lisianthus were started in the greenhouse on January 2, 2020.

One of the nicer lisianthus this season with better bloom and vigor than some others.

This was one of the better blooming lisianthus this summer although bloom declined a bit by the end of August.

This had the best bloom early in the summer but bloom declined into August.
July 28  Height: 16-18"  Spread: 6-9"

Aug. 31  Height: 9-14"  Spread: 5-8"

Nicest bloom early in the season. Declined a bit by the end of August.

Eustoma grandiflorum (Lisianthus) 'Voyage 2 Pink'

July 28  Height: 17-20"  Spread: 8-10"

Aug. 31  Height: 9-12"  Spread: 8-10"

Like the other lisianthus, bloom on this one was better earlier in the season with a decline by the end of August.

Gaillardia grandiflora 'Arizona Red'

July 28  Height: 5-10"  Spread: 6-15"

Aug. 31  Height: 5-10"  Spread: 5-16"

This lacked uniformity in size and vigor and bloom was best later in the season. All Gaillardia were started in the greenhouse on April 1, 2020.

Gaillardia grandiflora 'Arizona Sun'

July 28  Height: 5-10"  Spread: 8-15"

Aug. 31  Height: 4-11"  Spread: 9-16"

Bloom was also better later in the season with this Gaillardia. There were some size differences all season as well.
Gaura lindheimeri ‘Sparkle White’

Seed source: Park Seed

*July 28* Height: 12-24" Spread: 21-36"

*Aug. 31* Height: 34-36" Spread: 38-40"

Did well all season with good bloom, vigor and uniformity. It was started in the greenhouse on January 8, 2020.

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Gladiolus hybrida ‘Butterfly’

Corm source: Burpee

*July 28* Height: 18-20" Spread: 6-8"

*Aug. 31* Height: to 42" Spread: 8-10"

The corms were planted June 3, 2020 and didn’t start blooming until August. They were never very vigorous or floriferous.

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Gomphrena globosa ‘Fireworks’

Seed source: Burpee

*July 28* Height: 30-32" Spread: 26-28"

*Aug. 31* Height: to 38" Spread: 36"+

Good vigor, bloom and uniformity all season. Gomphrena was started in the greenhouse on April 6, 2020.

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Gomphrena globosa ‘Las Vegas Mix’

Seed source: Park Seed

*July 28* Height: 16-18" Spread: 19-22"

*Aug. 31* Height: 25-29" Spread: 18-20"

Top performer all season with good bloom, vigor and size uniformity.
Gomphrena globosa ‘Strawberry Fields’

July 28 Height: 22-23” Spread: to 24”

Aug. 31 Height: to 34” Spread: to 30”

Top performer all season with good bloom, vigor and uniformity.

Gypsophila muralis ‘Gypsy White Improved’

July 28 Height: 2-3” Spread: 3-5”

Aug. 31 Died

2018 All-America Selections (AAS) Flower Winner. This has not done well in the NDSU trial gardens for 3 years in a row. Plants have no vigor and die off. Seed was started March 25, 2020.

Helichrysum bracteatum ‘Sultane Mix’

July 28 Height: 28-30” Spread: 13-20”

Aug. 31 Height: 36-40” Spread: 20-28”

This had good bloom and vigor all season but there were some size differences. Seed was started in the greenhouse on April 14, 2020.

Hibiscus acetosella ‘Mahogany Splendor’

July 28 Height: 30-36” Spread: 23-25”

Aug. 31 Height: to 60” Spread: to 40”

A Hibiscus grown for its foliage instead of its flowers, this was a top performer all season. Seeds were sown in the greenhouse on February 26, 2020 after soaking for 24 hours in warm water.
Impatiens walleriana 'Imara™ XDR Red Improved'
seed source: Park Seed

July 28  Height: 6-8"  Spread: 10-12"

Aug. 31  Height: 7-9"  Spread: 14-17"

The 'XDR' in the name stands for 'Extra Disease Resistant' and these have shown resistance to Impatiens Downy Mildew. These did well this year. Seeds were started in the greenhouse on March 23, 2020.

Impatiens walleriana 'Imara™ XDR Salmon Shades'
seed source: Park Seed

July 28  Height: 6-8"  Spread: 11-14"

Aug. 31  Height: 7-9"  Spread: 13-17"

The salmon color of the 'Imara™ XDR' series also did well this season.

Ipomoea quamoclit (Cypress Vine) 'Red'
seed source: Burpee

July 28  Spreading 2-3'

Aug. 31  Spreading 2-3'

Vigor was good on this vine but it didn't bloom as well as it should have. Seed was started February 26, 2020 after soaking for 24 hours in warm water.

Lablab purpureus (Hyacinth Bean) 'Ruby Moon'
seed source: Johnny's Selected Seeds

July 28  Spreading 4-5'

*Aug. 31  Spreading 4-5'

Very vigorous vine that did well all season with good vigor and bloom. Seeds were started April 7, 2020.
These did well in the greenhouse but once they were planted into the ground, they didn’t do much. By September, they were finally starting to bloom, again. Rooted cuttings were received on April 14, 2020.

Bloom was good but there were some size differences early in the season. The statice was started in the greenhouse on April 1, 2020.

Bloom was good but there were size differences between the plants.
Vigor and bloom were good but there were some size differences.

**Lobularia maritima (Alyssum) 'Snow Crystals'

* seed source: Burpee

July 28 Height: 3-5" Spread: 11-12"

Aug. 31 Height: 6-7" Spread: 17-20"

Some differences in vigor with one plant dying early. Bloom was nice later in the season. Alyssum was started in the greenhouse on April 7, 2020.

This was a top performer all season with good bloom, vigor and size uniformity.

**Melinis nerviglumis 'Savannah'

* seed source: Germania Seed

July 28 Height: 15-16" Spread: 16-18"

Aug. 31 Height: to 36" Spread: to 36"

Nice grass that develops pink plumes. It does well every year that it's in the trials. Seed was started February 18, 2020.
Mina lobata ‘Jungle Queen’
seed source: Park Seed

July 28 Spreading 3-4’

Aug. 31 Spreading to 4’

Vigorous vine but not many blooms. Seed was started March 26, 2020 after soaking in warm water for 24 hours.

Mirabilis jalapa (Four O’Clock) ‘Broken Colors’
seed source: Park Seed

July 28 Height: 22-24” Spread: 25-28”

Aug. 31 Height: 28-34” Spread: 27-36”

Vigor and uniformity were nice all season but bloom was best in August. Four O’Clocks seed was started in the greenhouse on March 6, 2020.

Mirabilis jalapa (Four O’Clock) ‘Kaleidoscope Mix’
seed source: Burpee

July 28 Height: 22-24” Spread: 25-28”

Aug. 31 Height: 27-30” Spread: to 36”

Bloom on this was also the best after July but vigor and uniformity were good all season.

Nicotiana x sanderae ‘Perfume Hybrid Mix’
seed source: Park Seed

July 28 Height: 13-16” Spread: 12-22”

Aug. 31 Height: 16-19” Spread: 12-25”

This had great bloom all season but there were differences in size and spread. Seed was started April 1, 2020.
Ocimum basilicum (Basil) 'Amethyst Improved'

- July 28: Height: 17-18" Spread: 15-16"
- Aug. 31: Height: 18-21" Spread: 15-18"

Good vigor and uniformity with a nice purple, black foliage color. The basil seed was started in the greenhouse on April 1, 2020.

Ocimum basilicum (Basil) 'Aromatto'

- July 28: Height: 22-25" Spread: 18-20"
- Aug. 31: Height: to 26" Spread: 17-20"

This basil also did well with good vigor and uniformity, especially later in the season.

Origanum x hybrida (Ornamental Oregano) 'Kirigami'

- July 28: Height: 3-5" Spread: 5-8"
- Aug. 31: Height: 2-6" Spread: 5-10"

Interesting plant but very slow growing. It also lacked uniformity in size, bloom and vigor. Seeds were started in the greenhouse February 25, 2020.

Osteospermum ecklonis 'Asti Purple'

- July 28: Height: 10-13" Spread: 14-16"
- Aug. 31: Height: 10-15" Spread: 19-24"

Looked nice all season but bloom wasn't uniform. Seeds for Osteospermum were started February 13, 2020.
Osteospermum ecklonis 'Asti White'

seed source: Park Seed

**July 28** Height: 11-14" Spread: 17-21"

**Aug. 31** Height: 18-20" Spread: to 30"

Good uniformity in size and vigor. Bloom was good but not uniform in timing.

Pelargonium x hortorum (Geranium) 'Maverick Orange'

seed source: Park Seed

**July 28** Height: 10-11" Spread: 9-13"

**Aug. 31** Height: 10-13" Spread: 12-17"

Plants were most vigorous later in the season. Geraniums were started in the greenhouse on February 13, 2020.

Pelargonium x hortorum (Geranium) 'Maverick Scarlet'

seed source: Park Seed

**July 28** Height: 10-11" Spread: 9-13"

**Aug. 31** Height: 10-12" Spread: 8-17"

Bloom on this was better later in the season.

Pelargonium x hortorum (Geranium) 'Maverick Violet Picotee'

seed source: Park Seed

**July 28** Height: 10-11" Spread: 8-12"

**Aug. 31** Height: 10-12" Spread: 13-14"

This was the least vigorous of the geraniums this season.
Pelargonium peltatum (Ivy Geranium) 'Tomato Mix'

*seed source: Park Seed*

July 28 Height: 4-5" Spread: 8-14"

Aug. 31 Height: 4-7" Spread: 12-20"

Not too vigorous but bloom was alright. There were also differences in size between the colors.

Penstemon barbatus 'Twizzle Purple'

*seed source: All-America Selections*

July 28 Height: 29-36" Spread: 8-11"

Aug. 31 Height: 22-28" Spread: 10-17"

2017 All-American Selections (AAS) Flower Winner. This Penstemon has a nice purple color but needs deadheading to stay clean looking. Penstemon were started in the greenhouse on Jan. 8, 2020.

Penstemon hartwegii 'Arabesque™ Red'

*seed source: All-America Selections*

July 28 Height: 15-17" Spread: 8-12"

Aug. 31 Height: 18-20" Spread: 16-20"

2014 All-America Selections (AAS) Flower Winner. Nice show of red flowers but needs deadheading to stay clean. Good vigor and uniformity this year.

Petunia x hybrida 'Celebrity Blue' (Floribunda)

*seed source: Park Seed*

July 28 Height: 9-10" Spread: 16-20"

Aug. 31 Height: 11-12" Spread: 24-26"

Nice bloom all season but not quite as vigorous or uniform in size as other petunias. All petunias were started in the greenhouse on March 25, 2020.
Bloom was good early but there were some differences in spread. By the end of August, there was some yellowing of the leaves and slight decline in bloom.

*Indicates a top performer during that evaluation time.

**Petunia x hybrida 'Celebrity Mix' (Floribunda)**

*Seed source: Park Seed*

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Top performer all season with good bloom, vigor and uniformity.

**Petunia x hybrida 'Easy Wave® Burgundy Velour' (Spreading)**

*Seed source: Park Seed*

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<td>Aug. 31</td>
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**Petunia x hybrida 'Easy Wave® Lavender Sky Blue' (Spreading)**

*Seed source: Park Seed*

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<td>Aug. 31</td>
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Nice all season with good bloom, vigor and uniformity.

**Petunia x hybrida 'Easy Wave® Pink Passion' (Spreading)**

*Seed source: Park Seed*

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<td>Aug. 31</td>
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Nicest by the end of August. There were some size differences showing early in the season.
Petunia x hybrida 'Easy Wave® Yellow' (Spreading)

Seed source: Park Seed

*July 28* Height: 8-10” Spread: 12-22”

*Aug. 31* Height: 11-14” Spread: 36”+

Very good bloom all season but some differences in size seen early in the summer.

Petunia x hybrida 'Evening Scentsation' (Multiflora)

Seed source: All-America Selections

*July 28* Height: 6-8” Spread: 16-18”

*Aug. 31* Height: 8-9” Spread: 24-26”

2017 All-America Selections (AAS) Flower Winner. Did very well all season with good bloom, vigor and size uniformity.

Petunia x hybrida 'Park's All Double Blended Hybrid Mix'

Seed source: Park Seed

*July 28* Height: 8-10” Spread: 10-19”

*Aug. 31* Height: 9-11” Spread: 18-28”

This petunia did fairly well all season but didn't bloom as well as some of the others.

Petunia x hybrida 'Purple Wave Improved' (Spreading)

Seed source: Park Seed

*July 28* Height: 8-9” Spread: to 24”

*Aug. 31* Height: 8-9” Spread: 40”+

Very good bloom all summer but there were some differences in size that were seen early in the season.
Petunia x hybrida 'Shock Wave® Coconut' (Spreading)

*July 28* Height: 8-9"  Spread: 17-18"
*Aug. 31* Height: to 15"  Spread: 36"+

Very nice all season with good bloom and vigor. Petunia 'Purple Wave Imp.' was overtaking it later in the season.

Petunia x hybrida 'Shock Wave® Coral Crush' (Spreading)

*July 28* Height: 6-8"  Spread: 5-19"
*Aug. 31* Height: 8-9"  Spread: 36"+

Color appeared more red than coral. Although it did well, other petunias had better bloom and vigor than this one.

Petunia x hybrida 'Shock Wave® Deep Purple' (Spreading)

*July 28* Height: 5-6"  Spread: 12-20"
*Aug. 31* Height: to 8"  Spread: 36"+

Very good bloom and vigor all summer but there were some size differences early in the season.

Petunia x hybrida 'Shock Wave® Denim Shades' (Spreading)

*July 28* Height: 5-6"  Spread: 12-16"
*Aug. 31* Height: to 11"  Spread: 18-20"

Very good bloom all summer but there were differences in spread early in the season.
Petunia x hybrida 'Shock Wave® Pink Shades' (Spreading)

seed source: Park Seed

*July 28* Height: 5-6" Spread: 18-20"

*Aug. 31* Height: 8-9" Spread: 20"+

Nice all season with good bloom, vigor and uniformity.

Petunia x hybrida 'Shock Wave® Pink Vein' (Spreading)

seed source: Park Seed

*July 28* Height: 6-8" Spread: 18-22"

*Aug. 31* Height: 10-12" Spread: 40"+

Nice all season with good bloom, vigor and uniformity.

Petunia x hybrida 'Shock Wave® Red' (Spreading)

seed source: Park Seed

*July 28* Height: 5-6" Spread: 9-18"

*Aug. 31* Height: 4-6" Spread: 14-20"

Good bloom but this was one of the least vigorous petunias this season.

Petunia x hybrida 'Shock Wave® Rose' (Spreading)

seed source: Park Seed

*July 28* Height: 5-6" Spread: 2-14"

*Aug. 31* Height: to 8" Spread: 30-36"

One plant was smaller than the others but bloom and vigor were very good on all other plants.
Petunia x hybrida 'Tidal Wave® Red Velour' (Hedgifiore)

*July 28* Height: 12" Spread: to 36"

*Aug. 31* Height: to 14" Spread: 36"+

Good bloom, vigor and uniformity all season; nice carpet of red.

Petunia x hybrida 'Tidal Wave® Silver' (Hedgifiore)

*July 28* Height: 12" Spread: to 36"

*Aug. 31* Height: to 16" Spread: 40"+

Very nice all season with good bloom, vigor and uniformity.

Petunia x hybrida 'Wave® Carmine Velour' (Spreading)

*July 28* Height: 6" Spread: to 36"

*Aug. 31* Height: to 6" Spread: 40"+

2019 All-American Selections (AAS) Flower Winner. Very nice all season with good bloom, vigor and uniformity.

Plectranthus scutellaroides (Coleus) 'Giant Exhibition Complete Mix'

*July 28* Height: 10-13" Spread: 11-13"

*Aug. 31* Height: 13-18" Spread: 13-20"

Only had 5 plants of this mix but they did well this year. Seeds were started February 25, 2020.

NDSU Department of Plant Sciences-2020 Bedding Plant Trial Report. * Indicates a top performer during that evaluation time.
**Plectranthus scutellarioides** (Coleus) ‘Main Street Beale Street’

*Plant source: All-America Selections*

*July 28* Height: 10-13” Spread: 11-15”

*Aug. 31* Height: 15-17” Spread: 18-22”

**2020 All-America Selections (AAS) Ornamental Vegetative Winner.** This coleus did well in both sun and shade with good color and vigor in both environments. Rooted cuttings were received on March 25, 2020.

**Portulaca grandiflora** (Moss Rose) ‘Happy Hour Mix’

*Seed source: Burpee*

*July 28* Height: 5-6” Spread: 12-14”

*Aug. 31* Height: 6-8” Spread: 12-17”

These were doing very well early in the season but declined by the end of August. Seeds were started in the greenhouse on April 1, 2020.

**Rudbeckia hirta** ‘Denver Daisy’

*Seed source: Park Seed*

*July 28* Height: 10-15” Spread: 10-19”

*Aug. 31* Height: 9-19” Spread: 9-19”

Good bloom all season but there were some size differences. Rudbeckia were started in the greenhouse on March 6, 2020.

**Rudbeckia hirta** ‘Indian Summer’

*Seed source: Burpee*

*July 28* Height: 8-16” Spread: 8-15”

*Aug. 31* Height: 28-30” Spread: 18-20”

Not blooming by the July evaluation. Good bloom by the end of the summer but there were differences in size, especially early in the season.

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NDSU Department of Plant Sciences-2020 Bedding Plant Trial Report. * Indicates a top performer during that evaluation time.
This wasn't very vigorous this year and there were differences in sizes and blooming.

**Rudbeckia hirta 'Prairie Sun'**

*seed source: Johnny's Selected Seeds*

*July 28* Height: 8-12" Spread: 3-9"

*Aug. 31* Height: 8-12" Spread: 4-10"

Only a few blooms by the end of July but this was a top performer by the end of August with good bloom, vigor and uniformity.

**Rudbeckia hirta 'Sahara'**

*seed source: Johnny's Selected Seeds*

*July 28* Height: 8-12" Spread: 6-12"

*Aug. 31* Height: 17-22" Spread: 13-16"

**Salvia coccinea 'Summer Jewel Lavender'**

*plant source: All-America Selections*

*July 28* Height: 12-16" Spread: 10-22"

*Aug. 31* Height: 10-12" Spread: 14-15"

**2016 All-America Selections (AAS) Flower Winner.** Good vigor all season but bloom was best early in the summer. All *Salvia* were started in the greenhouse on April 1, 2020.

**Salvia farinacea 'Fairy Queen'**

*seed source: Park Seed*

*July 28* Height: 18-20" Spread: 14-15"

*Aug. 31* Height: 22-23" Spread: 22-23"

Top performer all season with good bloom, vigor and uniformity.
This Salvia did well all season with good bloom, vigor and uniformity.

Top performer early in the summer but had a decline in bloom by the end of August. These Salvia were received as rooted cuttings on April 14, 2020.

This Salvia was also a top performer early in the season but had a decline in bloom by the end of August. These were received as rooted cuttings on April 14, 2020.

Slow to bloom but a top performer by the end of the season. This was full of painted lady butterflies when in bloom.
Top performer all season with good bloom, vigor and uniformity.

Salvia splendens 'Vista Formula Mix'

*July 28* Height: 10-14” Spread: 11-13”

*Aug. 31* Height: 12-15” Spread: 15-17”

Good bloom but definite size differences between the colors.

Salvia splendens 'Vista Purple'

*July 28* Height: 11-13” Spread: 12-14”

*Aug. 31* Height: 11-12” Spread: 13-14”

Top performer all summer with good bloom, vigor and uniformity.

Salvia splendens 'Vista Red'

*July 28* Height: 11-13” Spread: 12-14”

*Aug. 31* Height: 12-14” Spread: 13-14”

Top performer all summer with good bloom, vigor and uniformity.
Interesting dark purple color. Good bloom and vigor all season.

Scabiosa atropurpurea 'Pincushion Mix'

Seed source: Johnny's Selected Seeds

**July 28** Height: 18-29" Spread: 8-14"

**Aug. 31** Height: 23-25" Spread: 16-18"

Good vigor and bloom all season.

**Scabiosa atropurpurea 'Black Knight'**

Seed source: Johnny's Selected Seeds

**July 28** Height: 28-30" Spread: 13-15"

**Aug. 31** Height: 26-30" Spread: 18-20"

Interesting dark purple color. Good bloom and vigor all season.

**Senecio cineraria** (Dusty Miller) 'New Look'

Seed source: Johnny's Selected Seeds

**July 28** Height: 7-9" Spread: 7-12"

**Aug. 31** Height: 8-10" Spread: 8-18"

Good vigor but not uniform in size. Dusty Miller was started in the greenhouse on March 23, 2020.

**Senecio cineraria** (Dusty Miller) 'Silver Lace'

Seed source: Burpee

**July 28** Height: 6-8" Spread: 7-10"

**Aug. 31** Height: 12-14" Spread: 8-13"

Slow to get started but was looking very nice by the end of August.
**Solanum integrifolium**  Pumpkin on a Stick  
*seed source: Park Seed*

*July 28* Height: 18-20” Spread: 20-22”  
*Aug. 31* Height: 28-30” Spread: 22-25”

This eggplant is grown for its fruit which resemble small pumpkins. The plant has thorns and can get large so is better for a larger space. Seed was started March 25, 2020.

**Solanum ovigerum**  Easter Egg Plant  
*seed source: Park Seed*

*July 28* Height: 13-14” Spread: 15-18”  
*Aug. 31* Height: 15-20” Spread: 22-28”

This is also an ornamental eggplant. Its fruits go from white to yellow and are shaped like eggs. It had good vigor this year and produced quite a few fruit.

**Spilanthes oleracea**  'Lemon Drops'  
*seed source: Johnny's Selected Seeds*

*July 28* Height: 8-9” Spread: 22-23”  
*Aug. 31* Height: 12-13” Spread: 28-30”

Very good performer all season. Unique flowers look like small, yellow cones. Seed was started on February 13, 2020.

**Tagetes erecta**  (American Marigold) 'Big Duck Gold'  
*seed source: All-America Selections*

*July 28* Height: 20-22” Spread: 22-24”  
*Aug. 31* Height: 28-31” Spread: 28-30”

2019 All-America Selections (AAS) Flower Winner. Nice all season with good bloom, vigor and uniformity. All marigolds were started April 7, 2020.
**Tagetes erecta (American Marigold) 'Big Duck Orange'**

Seed source: Burpee

*July 28* Height: 17-18" Spread: 18-19"

*Aug. 31* Height: 22-24" Spread: to 30"

**2019 All-America Selections (AAS) Flower Winner.** Very nice all season with good bloom, vigor and uniformity.

**Tagetes erecta (American Marigold) 'Big Duck Yellow'**

Seed source: All-America Selections

*July 28* Height: 20-22" Spread: 22-24"

*Aug. 31* Height: 25-30" Spread: to 30"

**2019 All-America Selections (AAS) Flower Winner.** Did very well all season with good bloom, vigor and size uniformity.

**Tagetes erecta (American Marigold) 'Climax Mix'**

Seed source: Burpee

*July 28* Height: 25-36" Spread: 22-24"

*Aug. 31* Height: to 36" Spread: 36-40"

This was very vigorous (almost too big by the end of the season) but didn’t bloom as well as some other marigolds.

**Tagetes erecta (American Marigold) 'Coco Gold'**

Seed source: Johnny’s Selected Seeds

*July 28* Height: 28-30" Spread: 23-26"

*Aug. 31* Height: 18-20" Spread: to 36"

Did very well early in the season but had a decline in bloom by the end of August.
Tagetes erecta  (American Marigold) 'Garuda Deep Gold'

*seed source: All-America Selections*

![Image](July 28 Height: 29-30" Spread: 30-36"

*Aug. 31 Height: to 38" Spread: 36"+

2019 All-America Selections (AAS) Flower Winner. Did well all season but bloom was best in August. This got very big this year.

Tagetes erecta  (American Marigold) 'Inca II Hybrid Mix'

*seed source: Park Seed*

![Image](July 28 Height: 17-21" Spread: 17-19"

*Aug. 31 Height: 18-22" Spread: to 25"

Bloom was good all season but there were some differences in height that were more obvious in July.

Tagetes erecta  (American Marigold) 'Park's Whopper Mix'

*seed source: Park Seed*

*July 28 Height: 18-22" Spread: 20-24"

*Aug. 31 Height: 21-28" Spread: to 26"

Looked good all season with good bloom, vigor and uniformity.

Tagetes patula  (French Marigold) 'Alumia Vanilla Cream'

*seed source: Park Seed*

![Image](July 28 Height: 9-11" Spread: 10-16"

Aug. 31 Height: 9-17" Spread: 13-20"

Good bloom and vigor but there were some size differences.
Tagetes patula (French Marigold) 'Bonanza Bolero'  
seed source: PanAmerican Seed

July 28  Height: 7-9"  Spread: 9-14"

Aug. 31  Height: 9-13"  Spread: 13-15"

Very good bloom but there are some size differences.

Tagetes patula (French Marigold) 'Bonanza Orange'  
seed source: PanAmerican Seed

July 28  Height: 10-13"  Spread: 14-16"

Aug. 31  Height: 16-17"  Spread: to 26"

Nice, bright color but not uniform in bloom or size. Vigor was good.

Tagetes patula (French Marigold) 'Bonanza Yellow'  
seed source: PanAmerican Seed

July 28  Height: 9-11"  Spread: 9-12"

Aug. 31  Height: 10-14"  Spread: 13-20"

Good vigor but there were some differences in size.

Tagetes patula (French Marigold) 'Fireball'  
seed source: Park Seed

July 28  Height: 8-11"  Spread: 11-16"

Aug. 31  Height: 9-15"  Spread: 15-23"

Really good bloom and vigor but there were some differences in size.
Tagetes patula (French Marigold) 'Flamenco'

*seed source: Park Seed*

**July 28** Height: 5-7” Spread: 6-9”

**Aug. 31** Height: 6-9” Spread: 12-20”

Flowers have unique bicolor pattern. Good vigor but not as floriferous as other marigolds.

Tagetes patula (French Marigold) 'Golden Guardian'

*seed source: Park Seed*

**July 28** Height: to 26” Spread: to 36”

**Aug. 31** Height: to 36” Spread: to 36”+

This was very vigorous this year but didn’t have many flowers. The size went well beyond the 24” height it was listed as growing!

Tagetes patula (French Marigold) 'Super Hero Spry'

*seed source: All-America Selections*

**July 28** Height: 9-11” Spread: 11-14”

**Aug. 31** Height: 10-12” Spread: 18-20”

2018 All-America Selections (AAS) Flower Winner. Good bloom but some size differences all season.

Tagetes patula (French Marigold) 'Tiger Eyes'

*seed source: Park Seed*

**July 28** Height: 11-13” Spread: 13-18”

*Aug. 31** Height: to 20” Spread: 32-36”

Good vigor all season but bloom was the nicest at the end of August.
**Thunbergia alata 'Blushing Susie'**

*seed source: Park Seed*

July 28 Spreading 3-4'

Aug. 31 Spreading to 4'

This had very good vigor and bloom all season. *Thunbergia* seed were started March 23, 2020.

**Thunbergia alata 'White-Eyed Susie'**

*seed source: Park Seed*

July 28 Spreading 3-4'

Aug. 31 Spreading to 4'

This *Thunbergia* was also floriferous and vigorous all season.

**Tropaeolum majus (Nasturtium) 'Orchid Flame'**

*seed source: Park Seed*

July 28 Height: 11-13" Spread: 10-16"

Aug. 31 Height: to 18" Spread: 36"+

Very vigorous plants but there aren’t many flowers and the ones that are there are hidden under the foliage. *Nasturtium* were started in the greenhouse on April 14, 2020.

**Tropaeolum majus (Nasturtium) 'Park's Fragrant Giants Mix'**

*seed source: Park Seed*

July 28 Height: 15-16" Spread: 36-48"

Aug. 31 Height: to 20" Spread: 30"+

This is also very vigorous but there aren’t many flowers.
**Tropaeolum minus** (Nasturtium) 'Baby Rose'

Seed source: All-America Selections

<table>
<thead>
<tr>
<th>Date</th>
<th>Height</th>
<th>Spread</th>
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</thead>
<tbody>
<tr>
<td>July 28</td>
<td>9-11”</td>
<td>9-11”</td>
</tr>
<tr>
<td>Aug. 31</td>
<td>12-14”</td>
<td>16-18”</td>
</tr>
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</table>

*2019 All-America Selections (AAS) Flower Winner.* Good vigor but not many blooms and they are hidden under foliage.

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**Verbena bonariensis**

Seed source: Johnny's Selected Seeds

<table>
<thead>
<tr>
<th>Date</th>
<th>Height</th>
<th>Spread</th>
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</thead>
<tbody>
<tr>
<td>July 28</td>
<td>28-30”</td>
<td>36-40”</td>
</tr>
<tr>
<td>Aug. 31</td>
<td>36-38”</td>
<td>36-38”</td>
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</tbody>
</table>

This Verbena performs consistently well whenever it's in the trials and this year was no exception. Bloom and vigor were good and the butterflies love it. Seed was started March 23, 2020.

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**Zinnia elegans** 'Benary's Giant Mix'

Seed source: Johnny's Selected Seeds

<table>
<thead>
<tr>
<th>Date</th>
<th>Height</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 28</td>
<td>to 27”</td>
<td>20-24”</td>
</tr>
<tr>
<td>Aug. 31</td>
<td>to 36”</td>
<td>to 28”</td>
</tr>
</tbody>
</table>

Good bloom and nice color mix but some of the stems fell over and there were some size differences. Zinnias were started on April 7, 2020.

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**Zinnia elegans** 'Burpeanna Giants Mix'

Seed source: Burpee

<table>
<thead>
<tr>
<th>Date</th>
<th>Height</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 28</td>
<td>to 31”</td>
<td>28-30”</td>
</tr>
<tr>
<td>Aug. 31</td>
<td>17-35”</td>
<td>to 28”</td>
</tr>
</tbody>
</table>

Good bloom and vigor but some size differences.
**Zinnia elegans 'Cut and Come Again'**

*seed source: Burpee*

*July 28* Height: to 30" Spread: 28-30"

*Aug. 31* Height: 32-36" Spread: 34-36"

Good bloom and vigor but some stems fell over and there were some size differences.

**Zinnia elegans 'Deep Rose-Giant Dahlia Flowered'**

*seed source: Johnny's Selected Seeds*

*July 28* Height: to 30" Spread: 20-24"

*Aug. 31* Height: 27-30" Spread: 30-32"

Good bloom all season but was especially nice by the end of August.

**Zinnia elegans 'Dreamland Hybrid Mix'**

*seed source: Park Seed*

*July 28* Height: 12-24" Spread: 10-20"

*Aug. 31* Height: 12-25" Spread: 10-26"

Good bloom but not uniform in size.

**Zinnia elegans 'Envy'**

*seed source: Park Seed*

*July 28* Height: 16-23" Spread: 18-20"

*Aug. 31* Height: 23-25" Spread: to 28"

Best bloom and vigor by the end of the season.
Zinnia elegans 'Holi Scarlet'
seed source: All-America Selections


Aug. 31 Height: 15-18" Spread: 17-22"

2019 All-America Selections (AAS) Flower Winner. Very good performer all season with good bloom, vigor and size uniformity.

Zinnia elegans 'Oklahoma Mix'
seed source: Burpee

July 28 Height: 23-25" Spread: 20-22"

Aug. 31 Height: to 34" Spread: to 36"

Nice color mix and did well all season.

Zinnia elegans 'Pinca'
seed source: Park Seed

July 28 Height: 20-28" Spread: 22-26"

Aug. 31 Height: 32-36" Spread: 32-36"

This is supposed to be all pink but there was a gold flowered plant present. Despite that, this did well all season.

Zinnia elegans 'Queeny Lime Orange'
seed source: All-America Selections

July 28 Height: 21-24" Spread: 22-23"

Aug. 31 Height: 28-34" Spread: 30-36"

2018 All-America Selections (AAS) Flower Winner. Looked better early in the season. There were some height differences showing later in the summer.
Zinnia elegans 'Sunbow Mix'
seed source: Johnny's Selected Seeds

July 28  Height: 16-25"  Spread: 14-24"

Aug. 31  Height: 28-30"  Spread: to 36"

This zinnia did well all season.

Zinnia elegans 'Uproar Rose'
seed source: Park Seed

July 28  Height: 21-23"  Spread: 23-25"

Aug. 31  Height: 23-25"  Spread: 28-30"

Nice all season with good bloom, vigor and uniformity.

Zinnia elegans 'Whirligig'
seed source: Park Seed

July 28  Height: 18-23"  Spread: 22-24"

Aug. 31  Height: 26-28"  Spread: to 36"

Bloom was good on this but there were leaf spots present that I didn't see on the other zinnias.

Zinnia elegans 'White Wedding'
seed source: Burpee

July 28  Height: 9-10"  Spread: 12-13"

Aug. 31  Height: 9-11"  Spread: 18-19"

Very nice early in the season but as the flowers aged they became dull and grayish-brown.
**Zinnia hybrida 'Profusion Red'**

*seed source: All-America Selections*

**July 28** Height: 8-10" Spread: 13-14"

**Aug. 31** Height: 13-15" Spread: 20-22"

**2017 All-America Selections (AAS) Flower Winner.** Very nice with good bloom, uniformity and vigor all season.

**Zinnia scabiosa 'Zinderella Lilac'**

*seed source: Park Seed*

**July 28** Height: 24-26" Spread: 24-25"

**Aug. 31** Height: to 36" Spread: 22-25"

Nice all season with good bloom, vigor and uniformity.

**Zinnia scabiosa 'Zinderella Orange'**

*seed source: Park Seed*

**July 28** Height: 22-24" Spread: 24-26"

**Aug. 31** Height: 25-28" Spread: 18-20"

Nice all season with good bloom, vigor and uniformity.

**Zinnia scabiosa 'Zinderella Peach'**

*seed source: Park Seed*

**July 28** Height: 19-20" Spread: 22-25"

**Aug. 31** Height: 27-28" Spread: 20-22"

Nice all season with good bloom, vigor and uniformity.
Zinnia scabiosa 'Zinderella Purple'
seed source: Park Seed

*July 28* Height: 24-26” Spread: 24-26”

*Aug. 31* Height: 28-30” Spread: 18-20”

Nice all season with good bloom, vigor and uniformity.

Zinnia scabiosa 'Zinderella Red'
seed source: Park Seed

*July 28* Height: 22-25” Spread: 24-26”

*Aug. 31* Height: to 36” Spread: 28-30”

Nice all season with good bloom, vigor and uniformity.
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Address</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-America Selections</td>
<td>1311 Butterfield Road, Suite 311</td>
<td>all-america .org</td>
</tr>
<tr>
<td>Ball Seed (W)</td>
<td>622 Town Road</td>
<td>ballseed .com</td>
</tr>
<tr>
<td>Burpee (R)</td>
<td>300 Park Ave</td>
<td>burpee .com</td>
</tr>
<tr>
<td>Darwin Perennials (W)</td>
<td>622 Town Road</td>
<td>darwinperennials .com</td>
</tr>
<tr>
<td>Germania Seed Company (W)</td>
<td>5978 North Northwest Hwy</td>
<td>germania .seed .com</td>
</tr>
<tr>
<td>Johnny's Selected Seeds (R)</td>
<td>955 Benton Avenue</td>
<td>johnny .seeds .com</td>
</tr>
<tr>
<td>PanAmerican Seed (W)</td>
<td>622 Town Road</td>
<td>panamseed .com</td>
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<tr>
<td>Park Seed (R)</td>
<td>3507 Cokesbury Road</td>
<td>parkseed .com</td>
</tr>
<tr>
<td>Thompson and Morgan (R)</td>
<td>(Now listed as Gurney's Seed &amp; Nursery Co.)</td>
<td>gurneys .com</td>
</tr>
</tbody>
</table>

1 Disclaimer: Company names are included for public information; no discrimination is intended and no endorsement by NDSU or the North Dakota Agriculture Experiment Station is implied.

2 'W' after a company name indicates a wholesale or breeding company while an 'R' after a company name indicates a retail company.