

# Summer Color Trials Report

North Carolina State University

Raleigh, North Carolina

2025

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# Top Performers

## Beds



Photo Credit: Bernadette Clark

Begonia benariensis 'Surefire White'  
Begonia

## Containers



Photo Credit: Bernadette Clark

*Catharanthus roseus* 'Soiree Kawaii Hot Pink'  
Vinca

## Hanging Baskets



Photo Credit: Bernadette Clark

Pentas lanceolata 'Graffiti Rose Falls'  
Pentas

## General Introductory Notes and Acknowledgements

The trial gardens for seasonal color plant materials are located at NC State University within the JC Raulston Arboretum (JCRA) in Raleigh. The JCRA is a ten and a half acre site administered by the Department of Horticultural Science and located on 35° 47'N latitude, longitude 78° 42' W, with an elevation of 400'.

Plants to be entered into our trials are received in a variety of ways. About one quarter are germinated from seeds while the remainder originate as rooted cuttings or established cell plugs. Virtually all are grown within controlled greenhouse environments prior to placement in protected outdoor structures for hardening off. They were planted into their permanent trial locations on May 06, 2025. The predominant plant spacing in the bed trials was 18" × 24" (in-row × between-row spacing). Seven plants of each entry were used to evaluate landscape performance. Hanging baskets and containers had one plant each and were replicated three times. All ratings were taken weekly.

### Acknowledgements

We thank the following for their support:

- BASF, 26 Davis Drive, Research Triangle Park, NC 27709
- Pacific Organics, 650 Peter Gill Road, Henderson, NC 27537
- Sun Gro Horticulture, 4731 Homestead Place, Matthews, NC 28104

We are especially thankful to the departmental staff and the volunteers of the JC Raulston Arboretum who assisted in transplanting and maintaining the annual beds throughout the growing season ... we couldn't have done it without you all!

## Understanding Our Data

### Number of Weeks in Flower

This is recorded as the total number of weeks in flower throughout the entire season. It should give you an idea of whether or not a plant is best used for the whole season or as a "fill-in" for special displays. Obviously, those species grown for foliage interest alone, e.g. *Acalypha*, may score poorly in this column and should not be rejected based on this value alone.

### *Weekly Ratings*

Plants were given a visual rating weekly by the same person beginning May 27, 2025 (about three weeks after planting) through October 02, 2025. The overall rating was based on plant performance and appearance, including floriferousness, plant size and shape, and freedom from insect and disease problems. The rating scale ranged from 1 (very poor) to 5 (excellent) with 0.5 unit increments possible; a 0 rating indicated that all plants of the cultivar trial died. The best way to evaluate our trials is to come in person. The JCRA is open 365 days a year.

## **Summaries of Weekly Ratings**

The first rating that readers run to is the "all season average." This value represents overall performance for the entire summer season. However, realizing that there are species/cultivars which may do better in one part of the growing season versus another, we also provide an "early season average" and "late season average" for each entry. The former is the average of the first half of the evaluation period and the latter is for the end of the season. This information may be useful in planning short term plantings with high impact as well as for studying temperature preferences, life cycle changes, and/or the impact of photoperiod on plant performance. The "number of weeks rated above 3" gives you an idea of how consistently throughout the season an entry is an exemplary performer.

## **The Lists You'll Find in This Report**

The data is presented in three categories: beds, containers, and hanging baskets. This allows a more equitable way of comparing the entries. Each category has the same breakout of data. For example, you will be able to view a Top 10 listing for beds, containers, and hanging baskets entries.

"The Top 10" ([beds](#), [containers](#), and [hanging baskets](#)) – this list shows the entries with the top ten "All Season Averages." These were our best overall performers. When the list exceeds ten, there were ties.

"Leaders of the Pack" ([beds](#), [containers](#), and [hanging baskets](#)) – lists all entries with an "All Season Average" of 3.5 or better. We consider this the arbitrary cutoff rating for a "significant performer" in Raleigh. This list shows all your best choices listed by name.

"Leaders of the Pack – Early Season" ([beds](#), [containers](#), and [hanging baskets](#)) – this shows entries with "Early Season Averages" of 3.5 or better based on the first half of the evaluation period. This group may prefer cooler temperatures or only have a relatively short ornamental life, and might not show up on the "Leaders of the Pack" list above.

"Leaders of the Pack – Late Season" ([beds](#), [containers](#) and [hanging baskets](#)) – this shows entries with "Late Season Averages" of 3.5 or better based on the end of the season evaluations. They may prefer very warm temperatures or flower as daylengths start to shorten, which may omit them from the overall "Leaders of the Pack" list.

"Best of Breed" ([beds](#), [containers](#), and [hanging baskets](#)) – shows the best performing cultivars in each species.

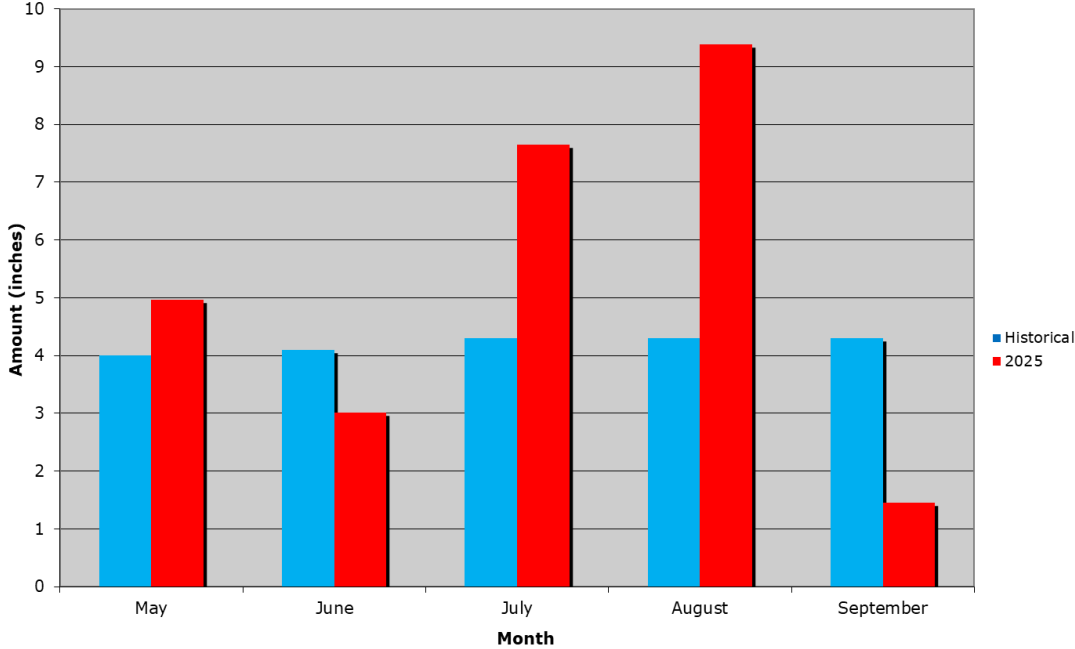
"Summary by Series" ([beds](#), [containers](#), and [hanging baskets](#)) – groups the information for cultivar series where appropriate. This can be a quick reference for related cultivars as well as a handy tool to judge the general performance of an entire series offered by a breeder/company.

"Weekly Ratings" ([beds](#), [containers](#), and [hanging baskets](#)) – evaluation given for each entry on a weekly basis.

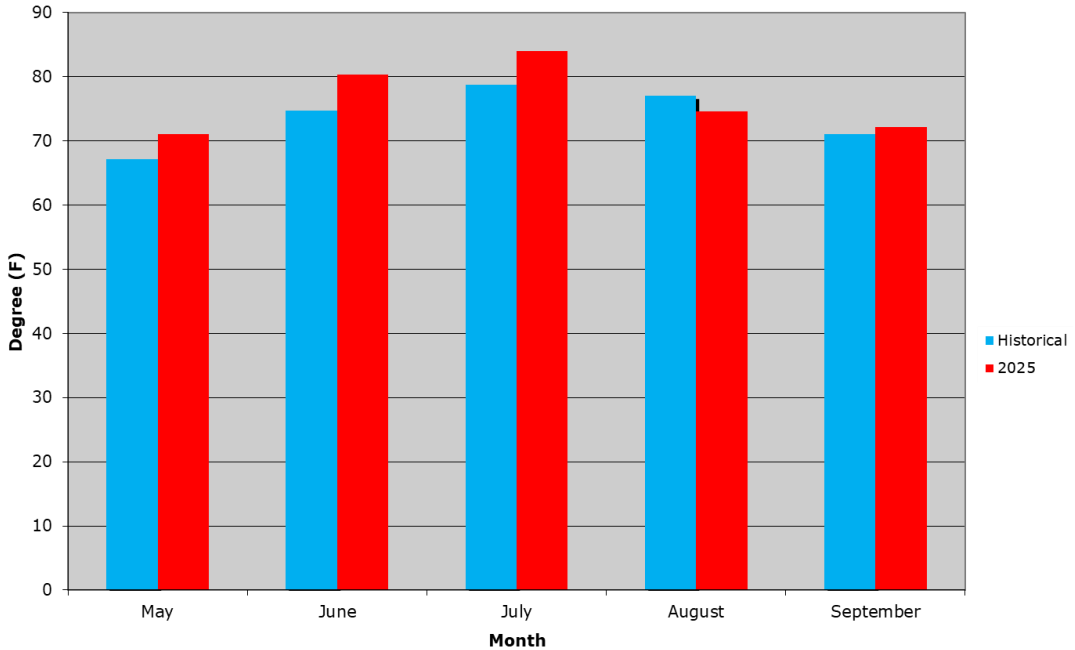
# Climate Charts

The Average Monthly Precipitation and Temperature for the Summer 2025 Trials

Precipitation 2025



Average Monthly Temperature (F) 2025



Our growing conditions this summer were all over the board, ranging from too wet to very dry coupled with normal temperatures to prolonged heat. May was slightly wetter with normal temperatures. In June, we experienced the beginning of a prolonged heat pattern. Two-thirds of the month had temperatures that exceeded 90°F coupled with slightly less than average rainfall (3.01 inches). June 2024 was our warmest June on record since records began in 1887! July continued the high heat pattern with only 4 days in the month below 90°F. Of particular note was the overnight temperatures with an average of 75.2°F. An overall wet July began with the arrival of Tropical Storm Chantal (July 6) followed by many rainy days for a monthly total of 7.65". We welcomed the more comfortable temperatures that August brought. Only one day the entire month registered above 90°F, August 17 (91°F). An early-month storm dumped 4.8" of rain over a two-day period. This rain pattern continued until the middle of the month. August precipitation ended with a 9.39" total! September was back to our more seasonal temperatures with our last 90-degree day of the growing season on September 25 (91°F). September was dry- well below its normal rainfall, about 3" below average!

Our greatest amounts of rainfall occurred on August 6, 7, 14 (2.6", 2.2", 2.42" respectively), and July 9 and 19, each recording 2". In a five-week period, we received 11.22" of rain! Our first 90-degree day occurred on June 6 (91°F). July had the most 90°F+ days at 27 days followed by June with 20 days. We had one 100°F+ day, June 24 (100°F).

## **Variance**

### **Variance: The Best of Uniformity**

Sometimes I think that the one number most often overlooked in our report is the variance. Go to the "Leaders of the Pack" data tables and look for its column. The term itself may be intimidating in light of its mystery, but need not be as it can be most informative. Simply put, the lower the variance, the most alike all plants are in the group evaluated, and hence the greater the uniformity. For so many in the commercial landscaping sector, they live and die by uniformity because appearance can be everything. So, by using a selected variance value of 0.1 as our very tough cut-off, we can really see which plants are setting the standard for superb uniformity. In many cases our results have confirmed some excellent reputations, for others, it's a first time notice.

### **Variance: All Over the Page**

Whereas small variance values indicate excellent uniformity, the opposite can point out cultivars with a "mind of their own!" They are not necessarily a poor choice, just not ruler perfect. In this case, plants with variance values of 1.0 or more were highlighted for great differences observed during the season. To be fair, there are many reasons for a lack of uniformity, most likely of which would simply be the result of our normal or extreme weather.

## **Seed and Plant Material Sources**

Please get in touch with these companies if you have specific questions regarding individual species and cultivars.

### **Seed and Plant Material Sources**

All-America Selections, 5201 Walnut Avenue, Suite 3, Downers Grove, IL 60515

Ball Horticultural Co., 622 Town Road, West Chicago, IL 60185

Ernst Benary of America, 2759 Wagner Court, Suite A, DeKalb, IL 60115

PanAmerican Seed, P.O. Box 335, West Chicago, IL 60185

Proven Winners, 1600 E. Lincoln Hwy Ste F, Dekalb, IL 60115-4962

Suntory Flowers, 2907 Deer Run Rd., Brenham, TX 77833