

2002 Bedding Plant Trials

Four universities put varieties to the test to see which are best-suited for garden performance.

By Jim Klett, Colorado State University; Bob Lyons, NC State University;
Rob Berghage and Alan Michael, Penn State University;
and Brent Pemberton, Texas A&M University

From the effects of drought to the many new, different varieties being introduced, the 2002 bedding plant trials were ground-breaking, as they are every year. In *GPN*'s second annual bedding plant trial report, Colorado State University, North Carolina State University, Penn State University and Texas A&M University give you the inside scoop on a few of their best performers. Look for additional, detailed trial comparisons from the University of Florida in upcoming issues.

COLORADO STATE UNIVERSITY

The annual trial gardens at Colorado State University are an ideal evaluation site because of high elevation (approximately 5,280 feet), intense solar radiation, drying winds and large fluctuations between day and night temperatures, season-long need for irrigation and clay-like soils. In 2002 we had many days over 90° F and even several over 100° F. Our precipitation was below normal with only 4.72 inches of rain from May 1 to August 31, 2002. However, in June and July we only recorded 1.68 inches of precipitation. Also, many areas in the state enforced water restrictions for homeowners and businesses.

Our bedding trials were planted at two sites: the W.D. Holley Plant Environmental Research Center in the southwest part of campus and at Remington Street Park, which is in a very visible site in Fort Collins. In 2002 we also planted more than 370 containers at the Remington Street Park site. More than 1,275 entries were planted in bedding trials and/or container trials. Twenty-two different seed or vegetative companies participated in the 2002 trials. Planting started on May 22 and was completed on June 21, 2002. All plants were fertilized with a slow-release fertilizer

(Osmocote 14-14-14) along with several liquid feedings throughout the growing season. Outdoor beds were watered between two and three times weekly, applying approximately one inch of water at each application. The Trial Garden Advisory Committee, along with numerous other professional and amateur horticulturists, evaluated the annual trials on July 21, and a sub-committee reevaluated again on August 31.

Diascia. Voted "Best of Show" for 2002 was *Diascia* 'Flying Colors Coral' from Proven Winners. The flowers on this plant were abundant and coral in color. The plant had a vigorous growth habit and good foliage color. It was an outstanding plant throughout the growing season.

Brachycone. Voted the "Best New Variety" was *Brachycone* 'Hot Candy' from Proven Selections (EuroAmerican). It had hot pink flowers throughout the entire growing season. The foliage was continually covered in delicate, hot pink blooms all summer long. It performed well both in containers and in the field trials.

Petunias. The best grandiflora petunia was 'Storm Pink Morn' from Goldsmith Seeds. It had 2-tone pink blooms that covered the entire plant.

Geraniums. The best zonal geranium was 'Americana Dark Red' because of its vigorous and lush foliage color and numerous dark red blooms.

New Guinea Impatiens. 'Super Sonic Lilac' from Fischer was voted the best New Guinea Impatiens. It had an excellent growth habit with large, pale lavender blooms that lightened up the entire plant.

NORTH CAROLINA STATE UNIVERSITY

The trials at the JCRA are rather standard in layout and practice. We work with uniform, rectangular beds in both sun and shade and



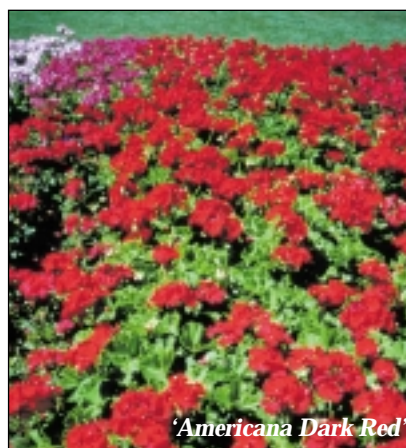
'Flying Colors Coral'



'Hot Candy'



'Storm Pink Morn'



'Americana Dark Red'



'Super Sonic Lilac'

variety information

uniformly space each entry within and between rows, but we’re currently considering some changes for the future. We generally install our summer material in late April, wait for establishment, and then rate on a weekly schedule through September.

We mulch with a variety of materials, but this year settled on one of our favorites — composted leaves. Our soil fertility levels are checked annually, and fertilizers are added as needed. Irrigation is an integral part of getting our plants established, but upon establishment, irrigation is normally ceased to allow plants to grow within the rainfall conditions of our area. However, the drought of 2002 forced us to irrigate several more times within the growing season to keep the plants alive. We generally do not apply pesticides, as we feel that the outside pressures of pathogens and insect pests are part of our evaluation process.

For the past three years, we have been doing something a bit unconvention-

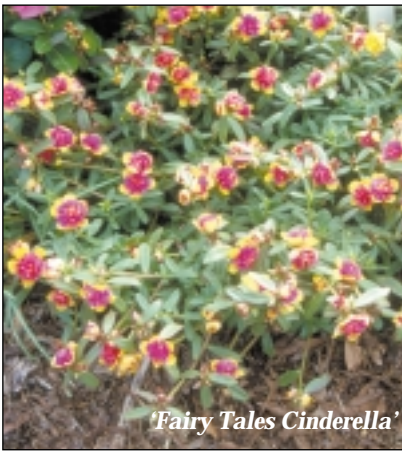
al within our trials to better ensure trial diversity and visitor interest. Two beds, which historically were devoted to standard evaluation and were planted with commercially supplied and paid-for cultivars, were removed. Instead, one bed was planted with a single genus of plants to show “cultivar or species diversity.” To date, this bed has showcased over 3-dozen sunflower cultivars, 30 sun coleus varieties, and in 2002, a wide array of dahlias. In the opposing bed, aptly named the “Annual Border,” a planned design using only annuals and/or tender perennials demonstrates the versatility of these plants in much the same way perennial borders are created. Both changes have been met with enthusiasm by visitors and members of the green industry.

Petunias. Petunia “Tidal Wave Silver” was one of the strongest of its genus, exhibiting an exceptionally strong flowering behavior and vigorous plant habit compared to its peers.

Portulaca. If you simply can’t leave the 70s behind, then Portulaca ‘Fairy



“Tidal Wave Silver”



“Fairy Tales Cinderella”



“Sweet Caroline Bronze”



“Purple Majesty”



“Chilly Chili”

Tales Cinderella’ gets my vote for the return of the “day glo” color palette! Its striking and unique flowers set it apart from other moss roses; and its performance during our drought was admirable.

Ornamental Sweet Potato. Okay, I’m biased in picking ‘Sweet Caroline Bronze’ ornamental sweet potato mainly because it originated here at NC State, but you just won’t find this foliage color in any other cultivar. Beautifully bronze, more controlled growth and complete with a dense cover of leaves, Sweet Caroline Bronze makes a fabulous addition to existing ornamental sweet potatoes for landscape use.

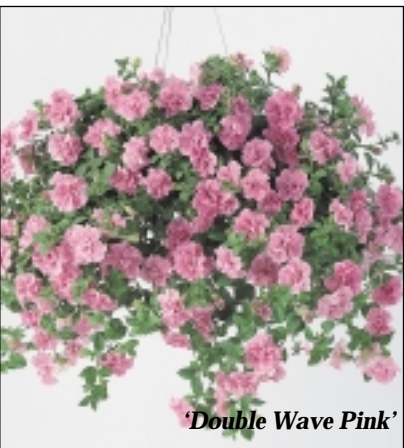
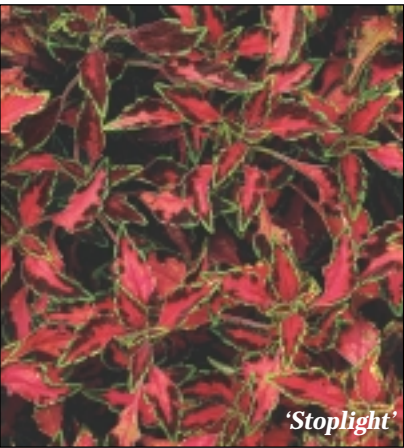
Pennisetum. Like so many others, we just didn’t think that Pennisetum ‘Purple Majesty’ was a Pennisetum at all...but it is! Not just another purple leaf grass, Purple Majesty maintains an erect stature; a non-fading purple color in leaves, stems and flower plumes; and an ability to grow quickly once the weather warms up.

Ornamental Peppers. Finally, ‘Chilly Chili’ ornamental pepper was a fail-safe and compact performer. It was named for its mild-tasting fruits, but we liked it because the fruits were ever-colorful and ever-present, right to the bitter end of the growing season.

PENN STATE UNIVERSITY

The summer of 2002 was the second driest in Pennsylvania history as well as one of the hottest. Although we received adequate rains early in the season, July and August severely stressed the annuals in the 2002 Penn State University Variety Trials at the Southeast Research and Extension Center at Landisville. Rains were slightly more consistent at the University Park trial site and temperatures more moderate; however, regular irrigation was required at both trial locations.

The vegetative trial had 930 entries, and there were about 500 seed



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entries. Each was evaluated for its outdoor garden performance by growing nine plants in three containers for the vegetative trial in Landisville, or a block of 20 plants in a 4-foot-wide garden bed for seed-propagated annuals and perennials at University Park.

Evaluators rated each cultivar’s garden performance using a numerical scale where one is unacceptable, two is poor, three is acceptable, four is good and five is excellent. Plants were evaluated every 2-3 weeks on the appearance of flowers and foliage, their uniformity, pest

problems and overall landscape display. The following varieties were awarded “Best Of Species,” which is reserved for cultivars with the highest rating in their respective species.

Angelonia. Gardeners are becoming more familiar with angelonia and are using it as a summer-blooming, snapdragon-like bedding and cut flower. Fortunately, breeders are introducing varieties such as Ball FloraPlant’s new ‘AngelMist Purple’ Improved which produces many flowers with a compact habit.

Bracteantha (Helichrysum). Bracteantha breeders have been working hard at improving this Australian flowering plant. *Helichrysum angustifolium* ‘Icicles’ is outstanding and is grown for its attractive silvery foliage and was entered by Esbenshade Greenhouse.

Calibrachoa. Of the 47 calibrachoa cultivars entered in this year’s trial, three-quarters rated good or excellent, a vast improvement over entries received four or five years ago. Henry F. Michell’s and Bodger Botanicals’ newly introduced ‘Spring Fling’ has an excellent display of bright yellow flowers splashed with orange, displayed on a vigorous, mounded plant. It was one of the top cultivars in this year’s trial.

Coleus. Vegetative coleus are making a strong comeback with their attractive leaf color, few detracting flowers and good sun tolerance. Ball FloraPlant ‘Stoplight’ is an outstanding variety with attractive, multi-colored foliage, few flowers and uniform growth that works well in the landscape.

Trailing Double Petunia. Breeders are successfully selecting for disciplined growth and uniform flowering on sturdy plants with fewer disease and cultural problems. Many of the best cultivars have moderately sized double and semi-double blossoms that cover the entire plant. Double petunias in our trial generally come into flower a few weeks later than vegetative single petunias. Ball FloraPlant has a champion with its Double Wave series of compact, rounded plants, each displaying a multitude of moderate-sized flowers on robust plants, but ‘Double Wave Pink’ received “Best of Species.”

Single Petunia. This year had the largest group of vegetative cultivars (105) ever entered into the Penn State Variety Trials. More than half of the vegetative cultivars rated good to excellent, and only seven rated poor, verifying that the plant breeders have created noteworthy improvements with their new petunia cultivars. The best were Ball FloraPlant’s ‘Suncatcher Pink Vein’ and ‘Suncatcher Lavender’, and Fides USA’s ‘Fortunia Pink Vein’. They have masses of eye-catching flowers covering the entire plant and plant centers, have no noticeable disease or insect problems, and do not show excessive susceptibility to iron chlorosis with normal fertility programs.

Zonal Geraniums. Of the 148 zonal geranium varieties entered, 97 rated good or excellent for garden performance. Ratings were highest on cultivars that have superior flower displays by early July and maintain it all summer, and on those that produce attractive, blemish-free foliage and have large flower heads held nicely above the leaf canopy. Dummen USA’s (HMA) entry, ‘Pinnacle Coral’, was one of the three highest-rated geraniums in this year’s trial. Oglevee’s ‘Patriot Watermelon’ and ‘Stardom Floribunda Julia’ were the other highest-rated.

TEXAS A&M

Texas A&M trials are located about 100 miles east of Dallas at the Texas



A&M University Agricultural Research and Extension Center at Overton. Transplants are grown in greenhouses at the Center from either seed or rooted cuttings provided by the many companies entering selections in the trials. More than 400 entries were planted this year in replicated plots in field rows covered with black plastic mulch in late April and May. Plants were watered and fertilized using drip irrigation, and they were monitored throughout the summer for flowering performance and health. Many entries performed well, but only a few ended up being designated exceptional.

Petunias. In the world of petunias, many of the trailing types can stand up to our summer conditions. This year, the Explorer series from Sakata, especially ‘Explorer Magenta’, performed well along with perennial favorites Waves and Tidal Waves from PanAmerican. Explorer Magenta spread vigorously to cover the plots but did not get so tall that shearing was required. Flowering was steady throughout the summer.

Impatiens. Impatiens did well this year. ‘Tempo Lavender Butterfly’ from Bodger has done well for two years now. Not only is it compact in the flat, but it has excellent garden performance as well. The new trailing impatiens ‘Fanfare Orange’ from Ball FloraPlant was also quite impressive! It was extremely vigorous to about 18 inches, with reliably large flowers throughout the growing season.

New Guinea Impatiens. The real surprise was the New Guinea Impatiens. I had written them off several years ago, but I received some entries this year that have changed my mind about this group. Obviously, the breeders have been busy! The best this year were ‘Tamarinda True Pink’ and ‘Pink Eye’ from Fides North America, and ‘Celebrette Grape Crush’ from Ball FloraPlant. Look for more extensive trials in the future for heat tolerance.

Vinca. Vinca is always a hit for hot weather. This year we had an outbreak of southern blight in our trial, but most entries went on to do well in the heat of late summer. Standouts were ‘Big Ruby’ from PanAmerican and the ‘Dan Diva’ series from Danziger, especially Dark Purple. Love those big flowers!

Tropical Foliage. In the tropical foliage category, Alternanthera ‘Purple Knight’ did not fail to impress. This seed-grown selection from PanAmerican topped out at about 18 inches and displayed a rich purple leaf color throughout the summer. Another amazing selection was the ‘Variegated Tapioca’ from Hines Nursery. Growing about four feet or larger, it provides a blaze of creamy variegation for full-sun tropical landscapes — the hotter the better! The ‘Sweet Caroline’ ornamental sweet potato series from the J. C. Raulston Arboretum was also a pleaser, especially the bronze selection, a color unique to this group. They are vigorous spreaders, but not nearly as strongly spreading as ‘Blackie’ or ‘Sulphur’. The coleus ‘Amora’ from Proven Winners was very nice as well. It grew about 18-24 inches tall and had not one flower all summer! **GPN**

Editor’s note: Photos page 30 courtesy of Jim Klett; page 32 courtesy of Bob Lyons; page 33, picture 1 courtesy of Rob Berghage and Alan Michael, picture 2 courtesy of Bodger, pictures 3-5 courtesy of Ball FloraPlant; pages 34-5 courtesy of Brent Pemberton.

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‘Purple Knight’



‘Variegated Tapioca’



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