



## 2007

# Penn State Horticulture Trial Garden Report

Southeast Agriculture Research & Extension Center (Landisville)  
1446 Auction Rd., Manheim PA 17545



### Authors

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**2007**  
**Penn State Variety Trial Report**  
**Southeast Agriculture Research and Extension Center,**  
**Manheim PA (Landisville)**

**I. Variety Trial Background**

Horticulture trial gardens have a long history at Penn State. The first garden was opened in 1933 at University Park Campus and quickly became testing site for the All-American Selections (<http://www.all-americanselections.org/>). The variety trial at University Park was discontinued in the fall 2006 and all flower and vegetable trials are being conducted at the Penn State Agriculture Research and Extension Center in Lancaster County (Landisville Trial Gardens).

**The Landisville Trial Gardens** was started in 1992 at the Southeast Agriculture Research and Extension Center (SE Center) on Auction Road in Manheim, PA



near the town of Landisville in Lancaster County. The goal was to evaluate the scores of new introduced vegetative propagated annual flower varieties for their outdoor garden performance. The trial expanded from a few geraniums varieties in the early 90's to now more than 60 genera and 1230 varieties by 2007.

The Lancaster area is noted for its warm, humid summers and long growing season, which alternates between excessive rains and moderate to severe droughts. It typifies the Eastern United States piedmont climate from Virginia to Connecticut and is home to about one fourth of the population of the United States.

The majority of entries received are vegetative cultivars, although we are seeing more seed entries. All of the 1230 entries are tested in containers, with three plants per pots replicated three times. Most varieties are tested in full sun; some entries like impatiens are tested in both sun and shade. In addition, this year combination containers and hanging baskets were evaluated.

**Greenhouse Culture** - Rooted cuttings and plugs are received from Mid-March through April and are immediately planted into 4-inch pots containing *Sunshine Horticultural Professional Growing Mix*. Plant are hand watered and fertilized using *O. M. Scotts, Marysville OH fertilizers*. Plants are pruned as needed to maintain compact healthy growth; hand watered and maintained under best management

practices. Minimal pesticide applications are used and no plant growth regulators are applied.

### **Outdoor Planting**

Geraniums, Calibrachoa, Petunias and Verbena were planted on May 15 & 16 and all others were planted May 24 with the help of over 100 Penn State Master Gardens volunteers and Capital Region Greenhouse Advisory Committee members.

All cultivars were transplanted into 12 inch pots containing soilless media of softwood bark, peat, coir and perlite from *Frey Bros., Quarryville PA* containing *RootShield from BioWorks, Fairport NY*. All pots received a top-dressed 22-3-8 *OsmocotePro* and *Peters Profession Excel Fertilizer* from *O. M. Scotts, Marysville OH*. Soil testing determined amount and type of liquid fertilizer used. Irrigation was applied through drip tubes, as needed to maintain growth without excessive wilting. During wet periods fungicide sprays are applied, Japanese beetles, aphids and other opportunistic insects and mites are controlled as required.

**Evaluations** are conducted four time during the growing season by rating overall landscape growth, flower power, foliage appearance and uniformity using a scale where 1=unacceptable, 2=poor, 3=fair, 4=good, and 5=Excellent. Pictures and evaluation results are place on the Penn State Trial Garden searchable website (<http://trialgardens.cas.psu.edu/>). A trial garden report is published in hard copy and is available for \$15.00 by contacting Alan Michael, Penn State Cooperative Extension – Dauphin County, 1451 Peters Mt. Rd., Dauphin PA 17018. 717-921-8803



Commercial greenhouse growers, plant breeders, garden center operators, landscapers, salespeople, horticulture consultants, master gardeners and consumers visit the Penn State Trials from Eastern USA and southern Canada. Plants are received from Central America, Africa, Europe, China, and USA and from local PA greenhouse growers. Field Day was held July 26, 2007

### **III. Trial Personnel**

Alan H. Michael, Ext. Educator & Director of Landisville Trial\*  
David Johnson, Ext. Specialist & Farm Manager, SE Res. & Ext. Center  
John Stepanchak, Research Associate, SE Res. & Ext. Center  
Anne Hawk, Horticulture Associate, Dauphin County  
Katie Jones, Variety Trial Assistant, Dauphin County  
Robert Berghage, Dept of Horticulture, University Park  
Eileen Keiter, Assistant to Director, Dauphin County

#### IV. Climatology\*

**Growing Season** -It was a fairly normal summer. June was warm, July normal and August was wet.

**June Summary** – June had above normal temperatures with normal rainfall. Average high temperature was 83 degrees (2.6 degrees above normal); the average low was 63.6 degrees (3 degrees above normal). The highest daily temperature was 95 and lowest was 53 degrees. Precipitation was slightly below normal at 3.7 inches, normal is 4.0 inches. It rained 12 days in June. Average Relative humidity was 63%.

**July Summary** – July was slightly below normal. Average high was 85 degrees; the average low was 65 degrees, which is one degree below normal. Highest temp was 94°F and lowest was 55°F. Precipitation was 4.2, which was 1 inches above normal. There were 12 days with precipitation. Average Relative humidity was 63% with 25 days of sunshine.

**August Summary** – August was warm and wet. Average high was 84; the average low was 67degrees with six days above 90 degrees. The highest daily temp was 94 degrees and the daily lowest was 58 degrees. Precipitation was 5.8 inches, which is 2.6 inches above normal. It rained 10 days in August. Relative humidity averaged 72% with 22 days of sunshine.

\*Based on information provided National Weather Service Forecasting Office in State College PA. From Harrisburg PA. ([www.ncdc.noaa.gov/ncdc.html/](http://www.ncdc.noaa.gov/ncdc.html/))

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