OSU Annuals Trial: 2012 Season Summary

The trial gardens at the Ohio State University have wrapped up the largest yet of our trial seasons: 750 entries representing 25 companies. The theme this summer was undoubtedly dictated by the weather, which was hot and dry. Interestingly, this trial season saw a significant decrease in field (or in-ground) entries, along with a drastic increase in container entries (-33% and 66% respectively, as compared to the 2011 season). The hanging basket trial was the newest addition in 2012, which was introduced on a small scale with 30 entries.

The OSU Annuals Trial offers four trial categories: Field trials, which include plants that are planted directly into the ground. Container and shade trials include plants that are grown in plastic containers in full sun or shade. Hanging basket trials include plants that are grown in plastic baskets. Details on growing conditions for each trial category can be found below.

A highlight to the trial season each year is the OFA Garden Reception. This event takes place in July, during the OFA Short Course, when the trial plants are showcased to hundreds of industry professionals visiting from around the world. This year, the American Plant and Garden Association's National Conference was held in Columbus. This was another great opportunity to give the trial plants a huge amount of exposure during a garden reception hosted by OSU's Chadwick Arboretum. Another annual event in which the trials are the center of attention is the Ohio Industry Open House, which takes place in August. Traditionally, this event is attended by local growers, but was expanded in 2012 to include landscapers, as well. The trial plants are also promoted through press releases, articles in trade publications, and presentations to interested groups.

Trial Plants

Seeded entries were received in January and sown by Darby Creek Growers in Orient, Ohio; scheduled to finish on week 14, as plug size 288. Vegetative entries were received as rooted cuttings on week 14. All young plants were transplanted into Dillen 4" square plastic pots. Transplanting was completed by week 17, and plants were grown on in the departmental greenhouses (on-site). All plants were treated once with PlantShield, and grown according to commercial production standards.

Field trial planting: Planting of cool-tolerant crops (*Petunia*, *Osteospermum*, *Argyranthemum*, *Lobelia*) took place on May 1 (week 18). The remainder of field entry plants was planted between May 15 and May 22 (weeks 19-20). Nine plants per cultivar were planted with adequate space for growth. Plants were watered until establishment, and then provided with at least 0.25" of irrigation per week. Plants were fertilized with 200ppm N from a 20-10-20 water soluble fertilizer on weeks 21, 26, and 31. Beds were mulched with double-processed hardwood to a depth of 2", and hand-weeded as necessary.

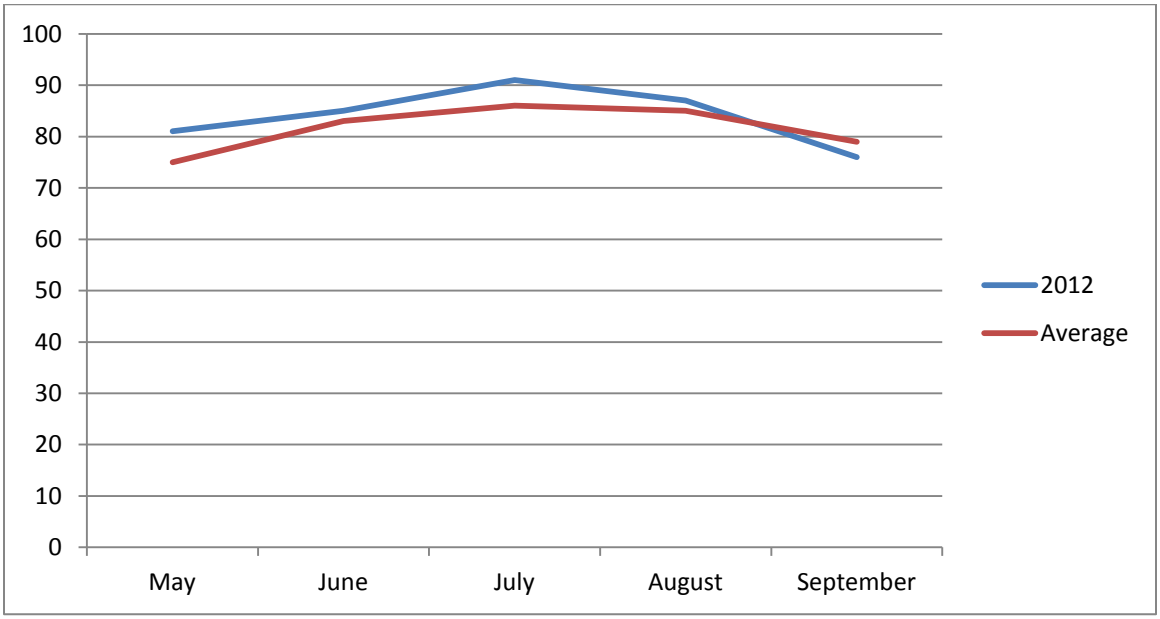
Container & shade trial planting: Planting took place between May 17 and May 24 (weeks 20-21) into 12" plastic pots, with one plant per container. Plants were grown in MetroMix 380 Mix (with the exception of *Begonia* and *Calibrachoa*, which were grown in Sunshine #1/LC1 Mix). Plants were hand-watered until establishment, and then placed on automatic drip irrigation. Osmocote Plus 15-9-12 was incorporated at the time of planting. A combination of 14 grams (0.5 ounces) 5-6 month and 7 grams (0.25 ounces) 8-9 month formulations were used in each container. Plants received a supplemental feeding of 200ppm N from a 20-10-20 water soluble fertilizer on week 28.

Hanging basket trial planting: Planting took place on May 29 (week 22) into 14" plastic baskets, with three plants per basket. Plants were grown in MetroMix 380 Mix, hand-watered until establishment, and then placed on automatic drip irrigation. Osmocote Plus 15-9-12 was incorporated at the time of planting. A combination of 14 grams (0.5 ounces) 5-6 month and 7 grams (0.25 ounces) 8-9 month formulations were used in each basket. Plants received a supplemental feeding of 200ppm N from a 20-10-20 water soluble fertilizer on week 28.

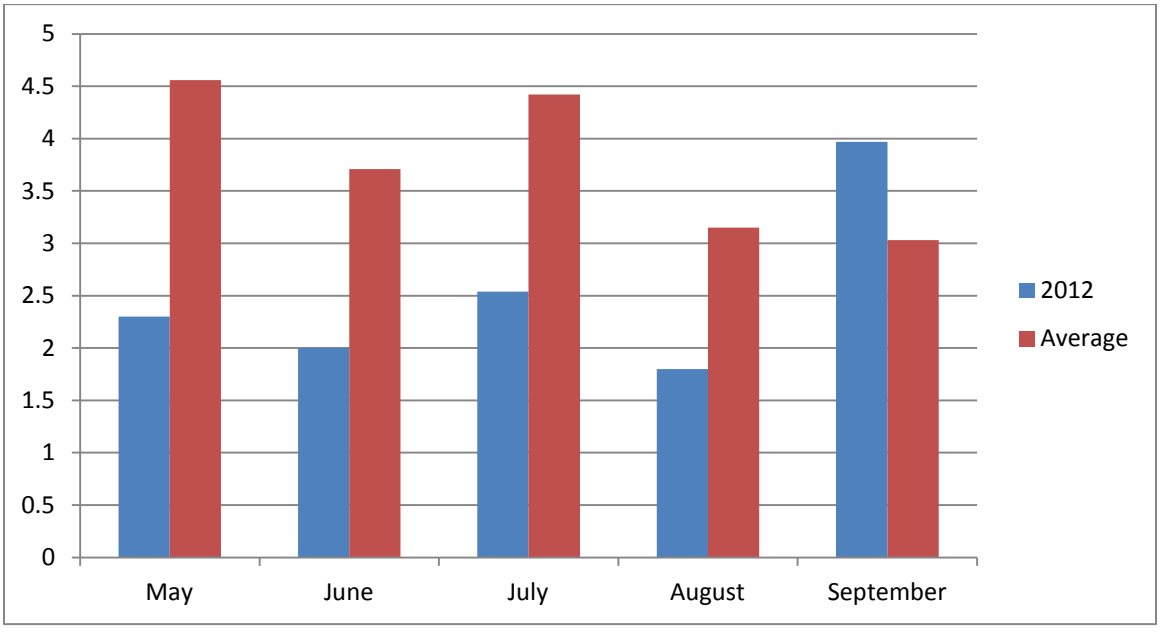
Weather

Summer weather conditions in central Ohio are typically highly variable, and this year was no different. High temperatures were slightly higher than normal, with frequent stretches of high overnight temperatures. Rainfall was significantly lower than normal through August.

Monthly Averages: High Temperatures (in Fahrenheit)



Monthly Averages: Precipitation (in inches)



Evaluations

All trial plants were evaluated four times throughout the summer. Evaluations took place weeks 26, 30, 34, and 38. During each of the four evaluation periods, two different types of evaluations were administered: the Grower Evaluation and the Consumer Preference Evaluation. In each type of evaluation, the same rating system was utilized, consisting of a rating scale of 1 through 5, in which 1 is the lowest (or least desirable) score, and 5 is the highest (or most desirable) score.

Grower Evaluation: The objective of this evaluation was to assess the performance of each entry, from an aesthetic standpoint. Each entry received a rating in five different categories: flower quantity, flower quality, vegetative vigor, uniformity among the sample, and an overall score. When possible, entries were rated in comparison to like crops (i.e. single-flowered petunias).

Consumer Preference Evaluation: The objective of this evaluation was to assess the preference of each entry by consumers in the central Ohio area. Our pool of evaluators consisted of Franklin County Master Gardeners, Chadwick Arboretum volunteers, and Chadwick Arboretum student staff. During each of the four evaluation periods, between 17 and 26 evaluators participated. Evaluators were instructed to give each entry a score of 1 through 5 to indicate their preference for the cultivar (a rating of 1 indicated they did not like the plant at all, while 5 indicated they liked the plant a lot). Responses were averaged for each evaluation period. Standard deviation was also calculated to indicate whether evaluators generally agreed or disagreed.

Note: In lieu of a 1-5 rating, sometimes another number was used:

- *1000 indicated that all plants in the sample were dead or otherwise unfit for evaluation*
- *In the Grower Evaluation, 99 indicated that the category was not applicable. For example, a foliage crop such as caladium would have been given a 99 in the flower quantity and flower quality categories. A 99 would have been given in the uniformity category if all but one plant in a sample was dead.*

Thank you!

Thank you to all who participated in the 2012 trials and contributed to our largest trial season yet – we are very glad to have completed another successful season, full of strong performers, unusual crops, and generally beautiful plants. Thank you to our donors who helped to make the trials possible. Thank you to our dedicated and hard-working volunteers, with whom we could not do this without. Special thanks to Dave Snodgrass, Jim Vent, Colleen Brown, and Shan Lin for their outstanding efforts.

2013 Highlights

We hope to increase the size of our trial once again next year, and to include common crops that are proven performers, as well as lesser-known, unusual crops, so that our trial can benefit a wide variety of users. We plan on expanding the hanging basket trial, as the plants performed exceptionally well and the trial was well-received by visitors. We hope to increase the number of containerized vegetable entries, and plan on adapting the evaluation criteria to better assess the utilitarian benefit of these crops. We plan on continuing our participation in the National Trials Database, so that our data can remain as accessible as possible.

For more information and to view all evaluation results, please visit our website: http://ohiofloriculture.osu.edu
Questions? Contact Dr. Claudio Pasian, trial director (pasian.1@osu.edu) or Lindsay Pangborn, trial manager (pangborn.9@osu.edu).

Consumer Preference Evaluation Results: Top-Performing Plants

Crop	Series	Cultivar	Category	Company	New?	Score
Chili Pepper		Loco	Container	Vegetalis		4.35
Petunia	Surfinia®	Baby Deep Purple	Container	Suntory	New	4.32
Petunia		White Ray	Field	Danziger		4.31
Begonia	Whopper	Rose Green Leaf	Field	Ball		4.30
Begonia	Whopper	Rose Bronze Leaf	Field	Ball		4.29
Caladium		White Diamond	Shade	Classic Caladiums		4.27
Petunia	Surfinia®	Wild Plum	Field	Suntory		4.24
Petunia		Purple Vein Ray	Field	Danziger		4.21
Caladium		White Dynasty	Shade	Classic Caladiums		4.21
Begonia		Gryphon	Shade	Proven Winners		4.18
Impatiens (NG)	Magnum	Pink	Shade	Dummen		4.15
Petunia	Cascadias	White	Field	Danziger		4.15
Petunia	Supertunia®	Bordeaux	Field	Proven Winners		4.14
Impatiens (NG)	Magnum	Hot Pink	Shade	Dummen		4.12
Petunia	Supertunia® Vista	Fuchsia	Field	Proven Winners		4.11
Petunia	Surfinia®	Deep Red	Container	Suntory		4.11
Chili Pepper		Basket of Fire	Container	Vegetalis		4.10
Caladium		Heart's Delight	Shade	Classic Caladiums		4.10
Impatiens (NG)	Magnum	Purple	Shade	Dummen		4.09
Petunia	Surfinia®	Rose Veined	Field	Suntory		4.08
Impatiens (NG)	Magnum	Dark Red	Shade	Dummen	New	4.08
Salvia		Amistad™	Field	Pacific Plug&Liner	New	4.08
Petunia	Littletunia	Merlot	Container	Danziger		4.07
Petunia	Supertunia®	Sangria Charm	Field	Proven Winners		4.06
Petunia		Purple Ray	Field	Danziger		4.05
Heuchera	Kira	Black Forest	Container	Danziger		4.04
Zinnia	UpTown	Orange Blossom	Field	Burpee Home Gardens		4.04
Petunia	Supertunia®	Raspberry Blast	Field	Proven Winners		4.04
Petunia	Surfinia®	Bouquet Denim	Container	Suntory	New	4.03
Calibrachoa	Million Bells®	Trailing Yellow	Basket	Suntory		4.03
Petunia	Whispers™	Star Rose	Field	Syngenta		4.03
Coleus		Chocolate Covered Cherry	Shade	PanAmerican Seed	New	4.01