

## The trial gardens at the University of Delaware Botanic Gardens

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### INTRODUCTION

The University of Delaware Botanic Gardens (UDBG) is generally described as encompassing the grounds surrounding the academic, greenhouse, research, and support buildings on South Campus. This translates into a range of soil types, moisture properties, and sun/shade exposures, which include wetlands, open lands, full shade areas, special collections, a garden of herbaceous perennials, and a Lepidoptera Trail, to name but a few. The Trial Gardens are relatively new to the UDBG complex and are situated just east of Fischer Greenhouse Lab and just north of Roger

Martin Drive. They were established approximately 10 years ago by Director John Frett, who converted a transient-purpose space into a traditional arrangement of linear beds patterned after trial gardens found at many universities. A decade of cultivation, which included the installation of turf pathways between trial beds and the annual tilling of mulch and other organic matter, has resulted in an excellent soil medium for plant growth. A very visible and obvious interpretive sign is placed at the forefront of the Trial Gardens and is often consulted by visitors who first enter the Trials (Figure 1).



Figure 1. A very visible and obvious interpretive sign is placed at the forefront of the Trial Gardens.

## GENERAL MANAGEMENT

Care and maintenance of Trials Gardens is primarily volunteer-driven, making them quite unique among university peers. A single individual with a professional background in trial gardens matters has willingly volunteered to oversee most aspects of conducting the trials, including bed design, inventory records management, seed sowing and post-germination care, maintaining post-installation aesthetics, and all labeling. Other UDBG volunteers are absolutely critical to the Trials success; they transplant literally hundreds of young plants in spring (mid-May) and help remove all spent vegetation after frost (Figure 2). One more volunteer assists strictly with maintaining the structural integrity and painting of the vine supports and vine fence.



Figure 2. Volunteers working on installing plants in beds along College Ave.

Specific cultivation practices are intentionally low input. Seedling cultivation includes light fertilization and then again only once immediately following transplantation. New transplants are watered upon installation and then once or twice again (weather depending) to insure establishment. That's it. Mulch is applied to all beds (approximately 2 in.) and serves as the primary weed inhibition strategy, augmented by hand-pulling, as needed. Glyphosate is used only infrequently to maintain clean bed edges. Finally, deadheading is done only selectively.

## **BED COMPOSITION STRATEGY FOR 2018**

The overall decisions related to bed composition rest with the Volunteer Curator, who intentionally makes changes each year to create a sense of anticipation and excitement among visitors. In 2018, one bed was reserved for the paid entries (Proven Winners) and another bed had only All-American Selections Winners (AAS) (Fig. 3).



Figure 3. One bed was reserved for the paid entries (Proven Winners) and another bed had only All-American Selections Winners (AAS).

University of Delaware Botanic Gardens is a designated AAS Display Garden, which means that the latest winners (and others) of the AAS program are sent to UDBG for planting somewhere in the public's view. University of Delaware Botanic Gardens chooses to include them in the Trial Garden. In 2018, the Curator acquired additional former AAS winners to accompany the latest winners, providing a rough timeline of AAS winners.

In 2018, the remaining beds were designed following a philosophy of "Curator Choice," whereby plant selection was often based on several loose categories:

- Vines: this growth habit always presents a challenge but should be included due to the sheer number and diversity of garden-worthy possibilities. The UDBG Trials accommodate vines via pyramid-like structures placed within the beds, and a tall painted fence constructed of repurposed materials.

2018 examples — *Vigna caracalla*/snail vine and *Ipomoea lobata*/Spanish flag.

- Display impact: What will draw the eye, capture the attention, and provide genuine visual interest via habit, size, form, and/or color?

2018 examples — *Xanthosoma aurea* 'Lime Zinger'/elephant ears and *Leonitis leonurus*/lion flower.

- Curiosity: relying on the unusual and unexpected.

2018 examples — *Carica papaya*/papaya trees and *Euphorbia cotinifolia*/tropical smokebush.

- Genus diversity: take advantage of the opportunity to include many species of the same genus.

2018 examples — *Salvia* and *Solanum*.

- Cultivar comparisons: take advantage of the opportunity to include an array of historic and current cultivars of the same species.

2018 examples — *Catharanthus/Vinca* and profusion zinnias (Figure 4).



Figure 4. Cultivar comparisons: take advantage of the opportunity to include an array of historic and current cultivars of the same species.

## FORMAL EVALUATIONS

These evaluations are reserved for only paid entries. In 2018, this included only Proven Winners selections, at \$40/entry. Efforts to increase the representation of paid entries have been difficult and often met with a similar response...UDBG is close to many other trial gardens and companies are reluctant to pay for evaluations so close to one another. Efforts will continue to increase the paid entries, despite this perception.

Evaluations commence as soon as plants are established. They are recorded every 2 weeks by the same UDBG staff person and continue through the end of September. A report is produced by the end of the calendar year and is sent to the contributing company and posted to the UDBG Website.

<http://canr.udel.edu/udbg/>

## INFORMAL EVALUATIONS

All America Selections Winners have already received their status through a rigorous program of national evaluation. Hence, they are not evaluated again in the UDBG Trials. However, they are included for general comparative and publicity purposes. Each label indicates the year in which a particular AAS winner received its recognition.

All other plants are evaluated on an empirical basis. Their performance is also conveyed on tours, visitor observations, and through posts on UDBG social media platforms (Facebook & Instagram).

The direct link to the Trials evaluation reports

<http://canr.udel.edu/udbg/gardens-plants/garden-areas/landscape-trial/>