ORNAMENTAL PLANT GERMPLASM CENTER

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Saving, Assessing, Using Herbaceous Plants

Project Objectives

The mission of the Ornamental Plant Germplasm Center (OPGC) is to furnish genetic raw materials and associated information to enhance American floricultural productivity to ensure a high-quality supply of herbaceous ornamentals.

Accomplishments

In 2006 the USDA National Plant Germplasm System's Herbaceous Ornamental Crop Germplasm Committee, comprised of stakeholders and members of the germplasm user community from federal, state, and private sectors, identified six genera as priorities for conservation at the OPGC: *Begonia, Coreopsis, Lilium, Phlox, Rudbeckia,* and Old World *Viola*. The three components of the OPGC mission are conservation of genetic resources, characterization of those resources, and education and outreach including distribution of OPGC germplasm to appropriate users.

Conservation

Since 2006 the OPGC has:

- Acquired 763 new accessions, raising the total number of accessions conserved to almost 3,200, including 540 accessions of priority species as well as 200 other genera.

- Conducted an 11 day, 4,000 mile trip through S.E. U.S., 65 new accessions were collected including 47 priority genera.
- Successfully produced seed of 289 accessions, for a total of 400 since 2001, making them freely available for world wide distribution to researchers and for off-site backup.

- Increased the total number of accessions backed up off-site at the National Center for Genetic Resource Preservation and the Arctic Seed Vault, Svalbard, Norway, to 1,322 accessions, or 41% of the collection.
- Prepared herbarium specimens for submission to the U.S. National Arboretum Herbarium.
- Made all accession passport and inventory information publicly available on the Germplasm Resources Information Network (GRIN, www.ars-grin.gov).

Characterization

Cooperators have worked with the OPGC to:

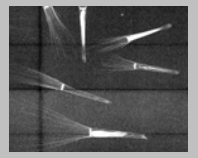
- Develop bar code technology for use in accession characterization and inventory maintenance.
- Screen clonal *Begonia* and *Pelargonium* for viruses.
- Develop molecular techniques to determine pansy ancestors and assist with horticultural crop improvement.

- Evaluate ornamental qualities of OPGC germplasm.
- Characterize *Begonia* accessions for response to light intensity and *Pythium.*
- Make all data publicly available at www.ars-grin.gov.

Education & Outreach

In the past 3 years the OPGC:

- Fulfilled 173 germplasm requests containing 957 order items. The largest community of germplasm users included U.S. state agencies and universities (50%) and U.S. commercial companies (25%).



- Publicized accomplishments at 14 professional meetings including the OFA Trade Show.
- Distributed more than 3,000 pieces of OPGC informational literature annually.
- Provided educational work opportunities for more than 40 undergraduates and interns from The Ohio State University and elsewhere; most students have since obtained jobs in the floriculture industry.
- Provided tours of the OPGC facility to almost 600 people.

Technology Transfer

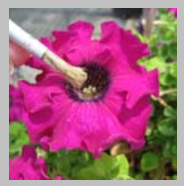
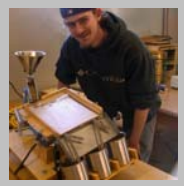
Since 2006:

- Center staff members have been invited to speak at five international professional meetings, produced 5 peer-reviewed publications and 13 abstracts.
- Made 763 new accessions of herbaceous ornamentals available to researchers around the world.
- The OPGC has maintained a website containing information about the center and germplasm being conserved; it is accessed more than 10,000 times annually.
- All accession and inventory information are publicly available at www.ars-grin.gov.

Additional Support

In addition to FNRI support the OPGC has received:

- $1.12 million of in-kind contributions from The Ohio State University since 2006, over $3 million since the project began in 2001.
- $30,000 endowment established by stakeholders in the floriculture industry.
- $17,000 germplasm collection grant from the USDA-ARS Plant Exploration Office.


Priority Genera


Begonia


Coreopsis


Lilium


Phlox


Rudbeckia


Viola

All the flowers of all the tomorrows are in the seeds of yesterday and today