

Flower Breeding Research Updates

By Neil Anderson



"Come see the variety of perennial crops being bred at the University of Minnesota."

- Two species of *Lupinus* have been found that are fall blooming (short day plants), fragrant, frost-tolerant, and winter-hardy. Normally the cultivated lupine species are summer flowering (long day plants). We are breeding these fall flowering species to expand the use of lupine in the perennial market.
- Two new garden chrysanthemums have been released for 2000/2001. 'Peach Centerpiece' is a sport from 'Centerpiece' (released in 1982), found by Brad Walvatne at Lake Country Gardens in Battle Lake. This peach-colored cultivar has the same production protocols and plant growth as 'Centerpiece'. 'Peach Centerpiece' will be on the market this fall. Another release is named in honor of the University of Minnesota's 150th anniversary, the sesquicentennial. 'Sesquicentennial Sun' provides a bouquet of fully double, golden flowers that are frost-tolerant. It will be available in 2001, but will be promoted at the university during the sesquicentennial celebrations.
- Research continues on the traits conferring hardiness of herbaceous perennials. We are collecting additional data this spring on crown structure and rhizome configurations in garden chrysanthemums that may be correlated with winter survival. In addition, this summer Bill Peters will be collecting native Minnesota *Gaura* species to hybridize with the commercial *Gaura lindheimeri* sold in MN nurseries that are not winter hardy.
- Be sure to visit the winter hardiness trials of new herbaceous perennials that are to be conducted at the St. Paul campus (Z4), the Lyndale Park Gardens (Minneapolis, Z4), and the Morris campus Research and Outreach Center (Z3/Z4). New genera to be planted this spring include *Gaura*, *Alstroemeria*, *x Heucherella* and new releases from the Blooms of Bressingham series.
- Lori Ylitalo just finished an undergraduate research project on the effect of photoperiod on growth of prostrate chrysanthemums developed in the University of Minnesota breeding program. Lori has been hired as a grower for Bergen's Greenhouse in Detroit Lakes.
- The Widmer Research Fund's grant to study the production and inheritance of prostrate chrysanthemums is in its final phase. This summer we will be evaluating the heritability of the prostrate growth form in the St. Paul field trials.
- In coordination with Jeff Gillman, we are installing a scientific trial site for perennials for shade/sun, heat/drought studies. Susan Reynolds will be conducting a 1-year study with shade-loving bamboo. She will be planting evergreen, clumping *Fargesia* in these plots for evaluation. Additional genera and species will be planted this year for further research.
- Winter and spring production trials were completed with seed-propagated Easter lilies and fragrant, colored trumpet types. Our research demonstrated that it is possible to force seed-propagated Easter lilies in <1 year. Commercially available hybrids differ widely in production time and bud counts, but cultivars such as 'Augusta F₁' flowered for Easter with high bud counts (7-10). Potted plant class, Hort 4051, conducted the initial research from seedling stage to floral initiation. No cold treatment is necessary with these lilies, but PGR's must be applied to reduce stem lengths.