

State of Arizona

Annual Report for the Calendar Year 2005
To the W-6 Technical Committee

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During 2005, 538 accessions were requested from the NPGS and sent to individuals in Arizona; only 29 accessions were requested from W-6. The largest number requested were from the NSSL (275 accessions, one request), followed by NC-7 (113 accessions), NSGC (42 accessions), NR-6 (35 accessions), S-9 (31 accessions), W-6 (29 accessions), OPGC (6 accessions), NE-9 (4 accessions) and RIV, COR and SOY (all with 1 accession requested from each). The accessions requested from W-6 were for *Amorpha* species (2 accessions), *Lupinus* species (9 accessions), *Salvia* species (6 accessions), *Lens* species (2 accessions), *Lathyrus* species (5 accessions), *Festuca* species (2 accessions), *Papaver* species (2 accessions), and *Lotus corniculatus* (1 accession).

There were 44 different requests made from individuals in Arizona, with 26 of these from university personnel, 17 from private individuals or companies and one from a Native American community. These 44 requests were made by only 20 different individuals, seven of whom made multiple requests (one individual alone made 10 separate requests).

User comments follow:

Dr. Meizhong Luo, Department of Plant Sciences, Arizona Genomics Institute, University of Arizona, received maize and maize relative's seed to perform comparative genomics studies for a NSF grant proposal (pending).

Emilie Snell-Rood, a Ph. D. candidate in Ecology and Evolutionary Biology, University of Arizona, obtained seeds of several mustard species to grow as host plants for butterflies. These requests were made because of problems in growing typical agricultural mustards in greenhouses during Arizona's summers. Two *Brassica nigra* accessions, PI 193756 (from Ethiopia, lot 86ncai01) and PI 367904 (from Mozambique, lot 89ncai01), each had high germination rates, and grew fast (bolted and produced flowers and seeds within 6 weeks of planting). The requestor sends "thanks for helping to make the NPGS services available. I have had very positive experiences with NPGS so far, and, especially as a funding-limited graduate student, am I thrilled that such a service exists."

Matt Berry, from the Arboretum at Flagstaff, requested 30 *Solanum* accessions form NR-6. Unfortunately he is no longer at the Arboretum. The only information in their records that they thought might be helpful was from another request (probably requested in 2004) of 340 *Lupinus mutabilis* seeds. These seed were tested for germination using different scarification and misting treatments. No scarification resulted in only 6% germination,

and scarification resulted in 60-75% germination, however, results were affected by predation on seeds by rodents.

Katy Larkin (Research Specialist, Department of Plant Sciences, University of Arizona) evaluated plants of PI 126449 (*Lycopersicon hirsutum f. glabratum*) under greenhouse and growth chamber conditions. Plants performed as expected under greenhouse conditions, but those maintained in growth chambers experienced blossom drop. Under greenhouse conditions plants appear vigorous and produced fruit.

Eric McDowell, graduate student, Department of Plant Sciences, University of Arizona, received several rhizomes of *Mentha x piperita* L. cv. Black Mitcham from the Corvallis, Oregon National Clonal Germplasm Repository. The rhizomes were planted in Sungro Sunshine Mix 4, approximately 3 inches below the surface, and kept damp in a growth chamber set at 16h light/8h dark, 25C, and 98% humidity. After 2-3 weeks shoots from the rhizomes were easily visible, and after 4 months there is substantial growth. He intends to use these plants to test the role of several transcription factors in regard to their regulation of secondary plant metabolism.