State of New Mexico
Annual Report for Calendar Year 2006
to the W-6 Technical Committee

Compiled by Ian M. Ray

Thirteen individuals from New Mexico requested materials from the NPGS in 2006. Only two of these individuals responded to a query letter requesting information on the quality of the plant materials received.

Mr. Wu Wang (New Mexico State University, NMSU, cotton breeding program) requested 25 diploid *Gossypium* accessions that are being utilized for DNA marker mapping of the A1 and A2 genomes in cotton. Seed from the following *G. herbaceum* accessions had NO germination: PI529700, PI532171, PI630014, PI630015, PI630024, PI630059. Seed from the following *G. arboreum* accessions had NO germination: PI629803 and PI629815. Low seed germination (<25%) was present in PI629808, PI630026, and PI630018.

Ms Carol Steinbach indicated that the quality of PI551821 strawberry plants was very poor.

General comment: Response to query letters has historically been low. This is not unusual for any survey. However, it may be worth considering other approaches to improve user feedback on the quality of the plant materials requested. Perhaps inclusion of a postage paid envelope, with a form containing the accessions shipped and the quality of the plant materials, might improve user feedback. However, this proposed option might be deemed to too expensive for states which receive a large number of germplasm requests (e.g. California). The NPGS may also wish to consider making the "intended use of material" field on the order form as a required field, as this may provide useful information for the NPGS in justifying future budgets.

Publications based on data collected from NPGS accessions:

Bhandari, H.S. 2006. AFLP marker diversity, genetic combining abilities, and prediction of hybrid performance for forage yield in alfalfa (*Medicago sativa* L.). Ph.D. Thesis, New Mexico State Univ. 123p.

Al-Lawati, A.H. 2006. Prediction of alfalfa diallel hybrid performance using DNA markers and morphological traits. Ph.D. Thesis, New Mexico State Univ. 174p.

Bhandari, H.S., C.A. Pierce, L.W. Murray, and I.M. Ray. 2007. Combining abilities and heterosis for forage yield among high-yielding accessions of the alfalfa core collection. *Crop Sci*. 47: 665-673.