

# Slender Wheatgrass (*Elymus trachycaulus*) and Mountain Brome (*Bromus carinatus*) Evaluation of Seed Collections for the Caribou-Targhee and Bridger-Teton National Forests Region 4

National Fire Plan – Restoration/Rehabilitation of Burned Areas EBLI (NFN3)

## 2006 Accomplishments

The purpose of this project is to evaluate wildland seed collections of two species of native perennial grasses used for revegetation. The intent is to conduct an evaluation of locally collected seed from sites throughout the two forests prior to increasing seed at a large-scale. The evaluation process is the same as would be done in the initial stages of developing a pre-variety or cultivar release.

During the summer of 2004, Forest employees collected 11 accessions of slender wheatgrass and 10 accessions of mountain brome. The site location and amount collected for each accession were documented. The seed collections were cleaned by the USDA-NRCS Aberdeen Plant Material Center (PMC) and planted for evaluation.

The initial evaluation trial is being conducted at the PMC Fish and Game farm located approximately 5 miles northeast of Aberdeen, Idaho. Experimental design was a randomized complete block with six replications of each accession. Each plot is 20 feet long and contains one row, and plots were planted on three foot centers. Experimental design also contains plots of known industry standards from each species for comparison.

Evaluation plots were established May 19<sup>th</sup>, 2005, the initial establishment evaluations were conducted on June 15<sup>th</sup> and September 16<sup>th</sup>, 2006.

Plots were evaluated for percent stand, plant density and seedling vigor during the initial establishment evaluation and at the second evaluation plots were evaluated for percent stand and plant width. More indicative biometric data, e.g. plant biomass, plant height and seed production, was done during the second growing season (2006).

Also in 2006 we (Rose Lehman, C-T & Jim Ozenberger, B-T) participated in a field trip for Region 1 employees conducted at the Aberdeen PMC for a very similar NFN3 project conducted at the PMC for grasses throughout Region 1.

**Goal of the Project:** Ultimately, the end product would be to make available to the Forests a Selected-Class Release of genetically-local slender wheatgrass and mountain brome that has shown good traits for producing quality seed for most revegetation needs, including large-scale projects such as wildfires and phosphate mine rehabilitation. The project will promote production by private industry, utilizing the seed certification process already in place to provide foundation seed to commercial growers.



*Evaluation plots of accessions 2006*

**Years Awarded:** 2004 & 2006

**Project Completion:** 2008

**Report number:** 2004 portion 3 of 3; 2006 1 of 3

**Expenditures:**

No funding was available for this project in FY2005. All work done in 2005 & 2006 was under an agreement with the USDA-NRCS Aberdeen Plant Material Center with FY2004 obligated funds.

In FY2006 the project was funded to continue the evaluation for two more years. All FY06 funding (\$44,020) was expended (obligated under contract \$39,320 & project coordination \$4,500).

**Partners:** USDA-NRCS Aberdeen Plant Material Center.



*Evaluation plots of accessions 2005*

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