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This is a quarterly field office newsletter to transfer plant materials technology, services, and needs. The plant materials personnel will be featuring short articles on project results, new cultivar releases and establishment techniques, seed collection, and field planting needs, etc. All offices are encouraged to submit articles about plant material-related activities relative to plant performance, adaptation, cultural and management techniques, etc. Direct inquiries to USDA NRCS, Plant Materials Center, RR2 Box1189, Bridger, MT 59014, Phone 406-662-3579, Fax 406-662-3428; or Larry Holzworth, Plant Materials Specialist, USDA NRCS Montana State Office, Federal Bldg., Rm 443, 10 East Babcock Street, Bozeman, MT 59715-4704, Phone 406-587-6838, Fax 406-587-6761.

45th Anniversary Field Day a Success.

The Bridger PMC, in conjunction with the Montana and Wyoming Association of Conservation Districts, hosted a field day to celebrate 45 years of commitment to conservation. On June 11, and in spite of rain-flooded conditions, more than 100 individuals braved the mud and cool temperatures to participate in the activities.

The crowd was treated to a series of slide shows that focused on the history and function of the PMC, the development of species' evaluations and selections, the off-Center field testing program, foundation seed production, plant propagation, seed processing, herbaceous and woody studies, technology development, and existing cooperative and future projects. The newly appointed Chairman of the PMC Board of Managers, Ken Borchert of Powell, Wyoming, officially dedicated the John Vanisko Plant Propagation Facility. John Vanisko, a long time District Supervisor with the Deer Lodge Valley CD, was a staunch supporter of the Plant Materials Center and prior to stepping down in December 2003, served as Chairman of the Board for 25 years. Lunch was provided by the Soil and Water Conservation Districts of Montana and Wyoming, Incorporated.

By Susan R. Winslow, PMC Agronomist.

Field Office Reminder--2004 Seed Collection List.

The Plant Materials (PM) Program is requesting seed collections of eight species in Montana and Wyoming. NRCS Field Office personnel, and other interested collectors, are being called upon to participate in the 2004 continued collection of fuzzytongue penstemon *Penstemon eriantherus* ssp. *eriantherus*, silverleaf phacelia *Phacelia hastata*, scarlet globemallow *Sphaeralcea coccinea*, and American vetch *Vicia americana*. Seed collections of the fuzzytongue penstemon are being requested as part of ongoing evaluations in the DATC project. The Montana and

Wyoming Plant Materials Committees have recommended the addition of four species to the collection list to address the conservation concerns as outlined in their Long-Range PM Plan. New to the field office seed collection list this year are groundplum milkvetch *Astragalus crassicaarpus*, silverleaf Indian breadroot *Pediomelum argophyllum* (synonym *Psoralea argophylla*), large Indian breadroot *Pediomelum esculentum* (synonym *Psoralea esculenta*), and prairie thermopsis *Thermopsis rhombifolia*.

All offices in Montana and Wyoming have received the bulletin. Complete details are accessible via each state's homepage by accessing Plant Materials (Wyoming employees can locate this under the section on Technical Resources), then Forms and Information on Seed Collections, and finally, the Seed Collection List. Each plant is taxonomically described to aid in identification and color photos are on display. Other data is provided on potential site location, bloom period, and approximate time of seed maturity. The four newly requested legumes will be posted at a later date. Call Larry Holzworth for more information.

By Larry Holzworth, Plant Materials Specialist.

New Employee at PMC.

Hi, my name is Darren Zentner and I am the new Biological Science Technician at the PMC. My duties include irrigating, spraying, cultivating, harvesting and processing seed, and maintaining and repairing equipment. I will also be active in maintaining and harvesting material for the National Park Service's cooperative projects.

I own a small irrigated farm and raise cattle and sheep. I have worked at the local farmers' cooperative and was responsible for selling chemicals, feed, and tires, and repairing a wide variety of equipment.

By Darren Zentner, PMC Technician.

Chinese Scientist on Technical Exchange

For six months this summer and fall, the Bridger PMC is honored to be working with Dr. Mao Peisheng, a professor and researcher from the China Agricultural University-Beijing, Peoples Republic of China. Dr. Mao is at the Bridger PMC to learn about the commercial seed industry, i.e., the seed certification program, commercial seed production, the development of cultivar and pre-varietal releases, and seed production research. In China, Dr. Mao has been involved in research on seed production response to various levels of fertilization, and in teaching seed production classes. While at the Bridger PMC, Dr. Mao is correlating seed moisture with seed harvest readiness on 14 different species of grasses, forbs, and shrubs.

Insect Damage to White Prairieclover

The Bridger PMC has been growing slender white prairieclover for 43 years and this is the first year that there has been any documented insect damage to a healthy stand. This spring, a 5-year old stand was completely wiped out by two different insect larvae which had tunneled in the root crown during the fall and winter months. The Entomology Department of Montana State University has identified the larger larvae to be that of a long-eared beetle *Megacyllene angulifera* and the smaller, more numerous larvae to be that of a yet to be identified micro-lepidoptera (moth). Once there are positive identifications, then we can figure out a line of attack to control any potential infestations on other stands of Antelope slender white prairieclover. As a precautionary measure, our healthy 2-year old stand of Antelope was sprayed this spring, prior to the arrival of the multitude of pollinators that show up on this plant during flowering.

By Mark Majerus, PMC Manager.

Weston County Forage Trial Evaluations.

Everet Bainter, Wyoming Range Management Specialist, and Larry Holzworth, Plant Materials Specialist, evaluated the Geier and Materi forage trials on June 24, 2004. The purpose of the trials were to identify the cool- and warm-season grasses that producers may utilize in their livestock operations in northeastern Wyoming and western South Dakota.

Natural Resource Conservation Service (NRCS) personnel from Montana, South Dakota, and Wyoming, and University of Wyoming personnel collaborated on the planning, planting and harvest of the two trials located at the Doug Materi and Marlin Geier ranches in Weston County.

Materi is located in a 10-14 inch precipitation Northern Plains, Loamy Ecological Site in MLRA 58B & 60A. Geier is located in a 15-19 precipitation Black Hills, Loamy Ecological Site in MLRA 61. A completely randomized block design with four replications was set up to compare and evaluate 31 grass cultivars at the Geier site and 29 grass cultivars at the Materi site. Each plot consisted of four, 20-foot rows, spaced 24 inches apart. A clean, firm seedbed was prepared at the Geier site by the cooperators and the trial was planted on May 12, 1999. The trial was planted at the Materi site on May 21, and Roundup™ (Glyphosate) at one quart/acre was applied May 25, to kill existing vegetation. All cultivars were seeded at the rate of 30 pure live seeds per linear foot of row. Each site received rain the day following planting. At the Geier site, a fifth replication was added and alfalfa, cicer milkvetch, sainfoin, small burnet, and Lewis flax were cross-seeded with the cool- and warm-season grass plots for observational purposes.

The optical evaluations rated good to excellent stands and plant vigor for 'Pearl' and 'Prairieland' Altai wildryes, and good stands and vigor for 'Oahe', 'Reliant', and 'Rush' intermediate wheatgrass, 'Manska', and 'Greenleaf' pubescent wheatgrass, 'Fleet', 'Paddock', and 'Regar' meadow bromegrass on the Geier site. Meadow bromegrass and Altai wildrye maintained consistently high ratings over five years. All the cross-seeded legumes and forbs failed or did very poor.

On the dryer Materi site, P-27 Siberian wheatgrass and 'Mankota' Russian wildrye rated good stands and plant vigor, while 'Secar' bluebunch, 'Douglas' and 'Nordan' crested, 'Vavilov' Siberian, and 'Rosana' western wheatgrasses, and 'Bozoisky-Select' Russian wildrye rated good to fair. This site has been extremely dry the last few years. Bozoisky-Select Russian wildrye was the only species maintaining consistent ratings over five years of evaluation.

By Larry Holzworth, Plant Materials Specialist.

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