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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, 98 South River Road, 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.

Roger Hybner New PMC Manager

Roger was raised on a dryland farm/ranch north of Rudyard, Montana, where the main crops grown were spring and winter wheat, barley, and oats. In the 1960's, his Dad was one of the first farmers in the area to use inorganic fertilizer. Dryland corn was also grown for silage to fatten yearling and 2-year old cattle. Normally, 80 cow/calf pairs were kept on native and introduced grass pasture. Conservation plantings included tall wheatgrass borders on strip edges, saline seep seedings, and caragana/plum/chokecherries planted on strip edges for wind erosion control and snow capture.

Roger graduated from MSU-Bozeman in 1985 with a Bachelor's degree in Agronomy and was hired by the University of Wyoming at the Torrington Research & Extension Center (REC). The main research focus was on no-till plantings with a winter wheat/alternative crop rotation and tissue culture work with alfalfa resistance to various herbicides.

In the fall of 1986, he moved to the Sheridan REC as superintendent. His research emphasis was dryland and irrigated annual and perennial forages, cereal grains, oilseed crops, other alternative crops, viticulture, orchard fruits, landscape and shelterbelt tree plantings for aesthetics and wildlife, coalbed methane discharge water's effect on crop production, and low and high maintenance turfgrasses. In 1998-99, he attended MSU-Bozeman and received a master's in Ag Education. This he applied in teaching classes (Landscape Management, Weed and Crop Seed ID, and Range Plant ID) at the newly completed \$6 million Sheridan College Regional Agriculture Education Complex. In addition, he has taught a wide variety of Extension programs based on his research results that include crop and horticulture weed control, introduced pasture grass plantings, forages, pruning, grafting, grape production, and xeriscape.

Since late July of 2004, he has been the NRCS's Lower Yellowstone Area Conservation Agronomist serving the 11 southeast counties in Montana. The main job emphasis was zero tillage conversion for both irrigated and dryland cropping systems, manure management from AFO-CAFO operations, and alternative crops. Roger's start date at the Bridger PMC is October 30. He is very excited to be back in the research field and looks forward to meeting old and new friends in Montana and Wyoming.

By Larry Holzworth, PM Specialist.

MT & WY State Conservationists Prioritize Critical Issues for the Bridger PMC Action Plan

The Bridger Plant Materials Center (PMC) State Conservationist Advisory Committee meeting was held April 27, 2006. In attendance was Dave White, Montana State Conservationist and Adolfo Perez, Wyoming State Conservationist, along with the respective State Resource Conservationists, the Bridger PMC staff, and the MT/WY Plant Materials Specialist. The purpose of the meeting was to review the PMC staffing, budget, current projects, and the 2001 Bridger PMC Long-Range Program (LRP). The 2001 Bridger PMC LRP is based on local conservation problems and needs, and was developed with input from a variety of sources, including private land owners/managers and Conservation District Supervisors. The committee reprioritized the 2001 Plan, placing emphasis on current critical issues that can be addressed with plants and plant technologies by the Natural Resources Conservation Service (NRCS) PMC program. The plant solutions for the conservation problems will be determined as staff, budget, and cooperative opportunities become available.

The procedure for setting up a plant materials project involves Ecological Science staff guidance and assistance in developing project plans describing the conservation problem, need, and action; a complete

literature review on the subject; development of an outline describing the study objectives; creation of a study plan of the scientific methods that will be used; potential plant species that may help solve the problem; and a communication plan for technology transfer of results and products to NRCS Field Offices, land owners, and other customers. Some of the actions may result in the development of a technical note summarizing appropriate studies. Some may involve the entire program procedure from plant collection, evaluation and selection process, to release and commercial production, which can take 10 years or more. Other concerns may require basic research and would be discussed with universities or the Agricultural Research Service and approached as a collaborative research project. Whatever the outcome, the plant and/or technology will be included in the Field Office Technical Guide, technical notes, or field demonstrations to assist land owners or managers with the conservation of natural resources.

The following table lists the critical issues and their respective action priority.

Critical Issues	Rank
Invasive species	1
Technology transfer	2
Species diversity	3
Revegetation of disturbed sites	3
Backyard/ barnyard	4
Energy production/conservation	4
Air quality – odor & fugitive dust	5
Carbon sequestration	5
Water conservation	6

By Larry Holzworth, PM Specialist.

Performance of New Demonstration Plots

The PMC installed two herbaceous demonstration plots this past spring to compare the establishment and performance of new plant materials that may have potential conservation use in Montana and Wyoming. A standard of comparison was included for most of the individual species.

Plant growth and development progressed to the stage of seed set in most of the 45 cool- and warm-season grass entries. The top performers include 'Lodorm'

green needlegrass, 'Trailhead' basin wildrye, 'Mustang' Altai wildrye, Fish Creek Germplasm bottlebrush squirreltail, 'Revenue' slender wheatgrass, Anatone Germplasm bluebunch wheatgrass, 'Cache' meadow brome, 'Bison' big bluestem, 'Alma' blue grama (by a nose over Bad River Germplasm), and "Forestburg" switchgrass. The bluegrass species all rated poorly. A few other entries normally fall-seeded are expected to be contenders next year.

There was quite a bit more variability, possibly due to site preparation, in the establishment of the 31 legumes and forbs. The highest ratings went to Bismarck Germplasm purple prairieclover, 'Chemung' crownvetch, Canada milkvetch (not yet released by the North Dakota PMC), 'Lutana' cicer milkvetch, 'Ladak' alfalfa, 'Eski' sainfoin, "Prairie Gold" Maximilian sunflower, Maple Grove Germplasm prairie flax, and Stillwater Germplasm prairie coneflower. An introduced browse plant, 'Puna' forage chicory, also did very well. The penstemons will receive a necessary cold stratification this winter and are expected to germinate and grow next spring.

These plots will be maintained and evaluated for several years. Information generated on the adaptation and performance will ultimately determine if additional plants can be added to the conservation toolkit. This, in turn, strengthens assistance to the wide variety of producers in countless situations and natural environments in Montana and Wyoming.

By Susan R. Winslow, PMC Agronomist.

Reminder to Mail in Seed Collections

All you busy and productive folks out there are reminded to mail in any seed collected in 2006. Species on this year's request list included fuzzytongue penstemon *Penstemon eriantherus* ssp. *eriantherus*, silverleaf phacelia *Phacelia hastata*, scarlet globemallow *Sphaeralcea coccinea*, and American vetch *Vicia americana*, groundplum milkvetch *Astragalus crassicaerpus*, silverleaf Indian breadroot *Pediomelum argophyllum* (synonym *Psoralea argophylla*), large Indian breadroot *Pediomelum esculentum* (synonym *Psoralea esculenta*), slimflower scurfpea *Psoralidium tenuiflorum* (synonym *Psoralea tenuiflora*), and prairie thermopsis *Thermopsis rhombifolia*. The updated address is listed just below the header on the first page, and please attention to Susan.

By Susan R. Winslow, PMC Agronomist.

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