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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.*

## **Plant Materials and the Grazing Land Conservation Initiative Partners**

Kim Stine, National Grazing Land Conservation Initiative (GLCI) Coordinator from Lincoln, Nebraska, reviewed GLCI funded projects across Montana the week of September 22, 2003. She visited the Bridger Plant Materials Center (PMC), and observed three GLCI-PMC joint projects. There is interest in exploring future opportunities involving the PMC in GLCI vegetative projects.

The funded projects are demonstration plantings at Circle, Jordan, and Judith Gap. The Circle planting is in cooperation with the McCone County Conservation District and features 66 different grass, forb, shrub, and tree species, plus several mixture combinations. The objective of this planting is to display commonly used and new plant materials, while taking into account the seeding techniques necessary for the successful establishment of diverse plant communities. The District hosts tours of the planting every year to inform and educate local landowners.

The Jordan planting is on private land and features comparisons of warm- and cool-season grass, legume, and shrub mixtures. Plant tissue is sampled at various phenological stages during the active growing season to determine the amount and type of nutrients available as well as the forage quality for livestock.

A small demonstration planting at Judith Gap features an array of pasture species. Frequent tours are conducted, and local landowners benefit from the close proximity by observing the performance of several species and gaining first-hand knowledge that aids in the decision-making process.

The Bridger PMC's role in the cooperative GLCI projects is to provide seeds for many of the species and technical assistance during the installation phase. At the Circle planting, the Center's Truax drill was transported to the site and used to seed the McCone demonstration area. The GLCI program provided funds for seed of species

not available from the PMC and covered the laboratory analysis costs.

The plant materials program is teaming up with GLCI and local conservation districts to install demonstration projects, and conduct range and pasture monitoring and research involving a multitude of rangeland issues. Funding assistance from GLCI and the technical assistance from the PMC facilitates the promotion of new plants and techniques through local education and demonstration.

*By Larry Holzworth, Plant Materials Specialist*

## **Certified Seed--not just Cultivars anymore**

In the past, all new conservation plant materials were released as 'Cultivars' (Cultivated Varieties). Because of the need for and the shortage of a diversity of native plant materials, new short-cut methods of releasing plant materials have been enacted throughout most of the U.S. The Pre-Varietal Germplasm release procedures makes it possible to release something quicker, but at the expense of extensive field testing. This release mechanism recognizes three classes of certified seed/plants: Source Identified (yellow tag), Selected (green tag), and Tested (blue tag).

The Source Identified class allows a person to certify seed collected from a native site. Prior to harvest, the site is inspected by a Seed Certification field inspector to document species identity, elevation, latitude/longitude, and associated species. The collector can also take seed to a farm and grow out another generation and still get the seed/plants certified. The Selected class involves the evaluation of numerous sources (ecotypes) of one species, from which the superior accession/accessions are increased for release to commercial growers. The Selected class germplasm is the progeny of phenotypically selected plant material, but with no proof of genetic superiority or distinctive traits. Tested class germplasm is the progeny of plants whose parentage has been tested and has proven genetic superiority or possesses distinctive traits for which the heritability is stable.

Cultivar releases are given a name (Example: 'Critana' thickspike wheatgrass) and are categorized as Breeders (white tag), Foundation (white tag), Registered (purple tag), and Certified (blue tag) seed/plants. However, the Pre-Varietal release mechanism requires that the release be given a name that is associated with its origin, contains the class of release, and that the word germplasm be included in the name (Example: High Plains Selected Class Germplasm Sandberg bluegrass). The Pre-Varietal released material will also be labeled as to which generation it is, e.g., G<sub>0</sub>=original collection, G<sub>1</sub> equivalent to breeders seed, G<sub>2</sub> equivalent to Foundation seed, G<sub>3</sub> equivalent to Registered seed, and G<sub>4</sub> equivalent to Certified seed.

In the near future, people in the field offices may be assisting cooperators in the purchase of Pre-Varietal released plant material. This message is a reminder to people that any plant material that has been released through the Pre-Varietal release mechanism and grown under the guidance of a State Certified Seed Program is indeed certified seed, equal in quality and grown under the same guidelines as the Cultivar releases.

*By Mark Majerus, PMC Manager*

## New Planting Guides Available

Informational brochures on 8 recent plant releases are now available from the Plant Materials Center. The color handouts provide details on plant descriptions, adaptation, uses, establishment, seed production, and foundation seed availability for three grasses, one legume and forb, two shrubs, and one tree species. Contact the PMC for copies of the following:

Washoe Selected Class Germplasm Basin Wildrye  
Foothills Selected Class Germplasm Canada Bluegrass  
High Plains Selected Class Germplasm Sandberg Bluegrass  
Antelope Tested Class Germplasm Slender White Prairieclover  
Old Works Source-Identified Class Germplasm Fuzzytongue Penstemon  
Prospectors Selected Class Germplasm Common Snowberry  
Open Range Tested Class Germplasm Winterfat  
Hunter Selected Class Germplasm Ponderosa Pine

*By Susan R. Winslow, PMC Agronomist*

## New Bareroot Planting Information Sheet

"A picture is worth a thousand words." With that tenet in mind, the Bridger PMC and Mary Myers (Public Affairs), with review by Bob Logar (State Staff Forester), Larry Holzworth (Plant Materials Specialist), John Justin (Manager, Montana Conservation Seedling Nursery), and Jeff Roe (Forester, Montana Urban and Community Association), have developed a handy, color, one-sheet handout titled, *Hand-Planting Guidelines for Bareroot Trees and Shrubs*. The brochure walks prospective planters through a series of steps, from receipt of plant materials through temporary storage, handling, installation, and maintenance. Attractive color graphics on the front page are supplemented with a step-by-step narrative on the back page. The graphics showcase weed barrier, windscreens, and tree shelters, as well as how NOT to plant a bareroot seedling. This publication is a companion to *Planting Guidelines for Containerized and Balled & Burlapped Stock*.

The goal of the effort was to provide a concise, digested summary of the important aspects of a successful bareroot planting. Bareroot plants are the production type of choice for many conservation applications using woody plants including windbreaks, shelterbelts, living snow fences, woody draw plantings, hedgerows, wildlife plantings, reforestation projects, and more. Although the Montana State University-Extension publication, *Windbreaks for Montana: A landowner's guide*, provides a wealth of windbreak design and installation information, a need was identified for an inexpensive summary of proper bareroot planting techniques. This publication can be handed to landowners, mailed with or attached to seedling orders, or handed out by staff and nurseries to cooperators and clients. The color graphics attract attention, making it useful as a bulletin for posting in the office.

Each office will be receiving a copy soon in the all-points mailing. Additional high quality copies are available by contacting Bob Logar or the Bridger Plant Materials Center. The document is also posted on the Montana NRCS website at <http://www.mt.nrcs.usda.gov/technical/ecs/forestry/bareroot.html> where it can be downloaded as a PDF document and printed. This publication will also be posted soon on the National Plant Materials website at <http://Plant-Materials.nrcs.usda.gov>.

Special thanks to Mary Myers and the entire Public Affairs staff for their assistance.

*By Joe Scianna, PMC Horticulturist*

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