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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.

Seed Collection Reminder

The Plant Materials (PM) Program is requesting seed collections of nine species in Montana and Wyoming. In 2005, continued collection is requested of fuzzytongue penstemon *Penstemon eriantherus* ssp. *eriantherus*, silverleaf phacelia *Phacelia hastata*, scarlet globemallow *Sphaeralcea coccinea*, and American vetch *Vicia americana*. There are five new legumes species requested to address emerging conservation concerns. These include groundplum milkvetch *Astragalus crassicaarpus*, 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 bulletin was electronically distributed in June to every Field Office in Montana and Wyoming, and the information can be accessed via each state's homepage. Helpful tips on seed collection can be found on the webpage as the newly distributed Montana NRCS Technical Note, *The NRCS Field Office Guide to Collecting Wildland Seed* (see article below for more details). Please schedule time to make seed collections and send directly to the PMC.

By Larry Holzworth, Plant Materials Specialist.

New Technical Note

Montana NRCS will soon publish a new Plant Materials Technical Note (TN) entitled *The NRCS Field Office Guide to Collecting Wildland Seed*. The TN was assembled to aid employees in the fine art of conducting successful wildland seed collections.

The TN contains valuable information on who-what-why-where-when to collect wildland seed. Included are tips on accessing detailed species descriptions on the MT NRCS homepage (see previous article), recording

collection site environmental attributes, locating sites with a GPS, earliest expected seed maturity dates by Natural Resource Area, visual aids to determine seed readiness, collection techniques, post-harvest handling and storage requirements, shipping instructions, and much more. For those interested in learning more about collecting wildland seed, a reference section is included.

The Bridger PMC relies on NRCS field personnel to collect wildland seed of high-priority species that have been identified as necessary in solving conservation problems. Each collection undergoes a period of initial evaluation, and superior performing entries advance to comparative testing, seed increase, release to the seed industry, and eventual distribution via the commercial market to the conservation community. Field Office collections are the rootstock of conservation, so be a part of the solution!

By Susan R. Winslow, PMC Agronomist.

Visiting Mongolian Botanist

To learn about reclamation and forage seed production techniques in the United States, Dr. Tumenjargal (Biology/Botany professor from the Mongolian Agriculture University in Ulaanbaatar, Mongolia) is spending 4½ months at various USDA research locations in Utah, Idaho, Montana, and Washington. She is presently spending 5 weeks at the Bridger PMC. During her stay in the U.S. she will also visit the PMC in Aberdeen, ID, the Plant Introduction Station in Pullman Washington, the USFS Shrub Lab in Provo, Utah, and the USDA-ARS Forage and Range Research Lab in Logan, UT. Her visit is sponsored by the Green-Gold Project, a Swiss funded project in Mongolia to improve forage availability through both grassland management and reseeding. A co-worker, Dr. Bolormaa, is studying grassland monitoring at New Mexico State University, working with Drs. Jeff Herrick and Kris Havstad.

By Mark Majerus, PMC Manager.

New Brochures Available From PMC

Great Northern Germplasm Western Yarrow

This is a Selected Class release of western yarrow, *Achillea millefolium* var. *occidentalis*. It is the first release of this species to the commercial seed industry. Great Northern Germplasm is a native, perennial forb of the Aster Family adapted to droughty conditions on gravelly loam and thin or sandy soils. This selection will be utilized primarily in seed mixtures to add species' diversity on rangeland, mineland, and roadside revegetation projects, and for enhancing wildlife habitat.

Spirit Germplasm Sweetgrass

This is a Selected Class release of sweetgrass, *Hierochloa odorata*. It is the Bridger PMC's first release of vegetative plant material. Spirit Germplasm is a native, cool-season grass that inhabits moist environments of riparian and wetland areas. Spirit Germplasm has a sweet vanilla fragrance and will be primarily used as a culturally significant plant in Native American spiritual and religious ceremonies. The vegetative propagules may also have utility in the stabilization and restoration of riparian and wetland ecosystems.

Stillwater Germplasm Prairie Coneflower

This is a Selected Class release of prairie coneflower, *Ratibida columnifera*. It is the first release of this species to the commercial seed industry. Stillwater Germplasm is a native, perennial forb of the Aster Family adapted to dry, open spaces with loam, sandy loam, or clayey loam soils. This drought-tolerant native wildflower selection will be utilized primarily in seed mixtures to add species' diversity on a multitude of revegetation projects, and for enhancing wildlife habitat.

By Susan R. Winslow, PMC Agronomist.

New Outreach Exhibit

The Bridger PMC, in cooperation with PMCs in Colorado, Idaho, Kansas, and North Dakota, was honored to display a new exhibit at the national meeting of the NRCS American Indian Alaska Native Employee Association, held June 27 to July 1, in Polson, Montana.

The large exhibit, *Conserving the Heritage of Native Plants*, provides an overview of the Plant Materials Program, briefly describes the historical testing and selection of native plants important to indigenous cultures, and outlines the types of cooperative assistance available to Tribal partners.

Included are descriptions of 22 native plants, complete with color images, a listing of traditional uses for each species, and the sources of commercially released

cultivars and germplasms. Accompanying the exhibit was written material in the form of plant brochures, plant fact sheets, 2004 activity summaries and seeding guidelines.

This exhibit is available for display at a variety of functions, such as agency training sessions, heritage month activities, State Conservation District conventions, local Conservation District annual meetings, etc. For more information, contact your local PMC.

By Susan R. Winslow, PMC Agronomist.

Plant Profile: Prairie Coneflower

Prairie coneflower *Ratibida columnifera* is a native, herbaceous perennial in the Aster Family. It is a very drought-tolerant wildflower commonly found in the Great Plains and in all of Montana except the very most western reaches of the state. Prairie coneflower prefers to grow in the dry, open spaces of prairie grasslands and mountain foothills, and is found along roadsides, in waste and disturbed areas, and along railroad rights-of-way.

It is prominently taprooted and grows upright from a woody base to a height of 12 to 48 inches. The numerous, pinnate leaves are deeply cut into linear or lance-shaped segments along alternately branched stems. Showy yellow ray flowers droop and surround the columnar-shaped, brown, central disk. Occasionally, the ray flowers are reddish-brown in color. Flowering occurs from late June until August, with seed ripening completed in early August to September. The mature seedhead has a pleasant odor that when crushed is similar to anise or licorice. The fruit is a 1-seeded, gray-black achene, with winged margins.

It does well on a variety of soil types, including loams and rocky to gravelly-sandy textures. It tolerates a pH range from slightly acidic to moderately alkaline, and weakly saline conditions, in areas receiving 10 to 30 inches (254 to 762 mm) of annual precipitation. Prairie coneflower attains optimum growth in full sun and low-to-moderate levels of competition within a native plant community. It occurs at elevations ranging from 3,200 to 8,400 ft. (975 to 2,565 m) in Colorado, Montana, Utah, and Wyoming. This plant is a common component of such ecological sites as shallow, silty, shallow to gravel, and silty steep. Associated species include western wheatgrass, bluebunch wheatgrass, prairie Junegrass, Sandberg bluegrass, common gaillardia, white and purple prairie clover, big sagebrush, western yarrow, and many more.

Prairie coneflower is palatable and nutritious to all classes of domestic livestock when utilized in early stages of plant growth and development. It is considered a desirable spring browse plant for big game

animals, and the seed of prairie coneflower is preferred by several species of upland birds and small mammals. Prairie coneflower is a medium- to tall-statured forb that may fill a structural cover niche for multiple species of upland game birds in a variety of plant community types. It's use is recommended in adding species diversity to native seed mixes in the rehabilitation of disturbed sites, such as rangelands, minelands, roadsides, park and restoration areas, prairie reconstruction projects, and conservation plantings in accordance with government farm bill programs. Prairie coneflower is commonly recommended as an ornamental wildflower in low maintenance or natural landscapes.

This species is fairly easy to establish when planted in the spring at a shallow depth of $\frac{1}{4}$ to $\frac{1}{2}$ inch. There are approximately 600,000 seeds/pound and the recommended seeding rate as a component in a native

mixture is $\frac{1}{4}$ to $\frac{1}{2}$ pound/acre. When used in a mix, adjust the seeding rate to the desired percentage of the mix.

There is only one release of this species available on the commercial market--Stillwater Germplasm Selected Class prairie coneflower was released in 2004 from the Bridger PMC. It is a composite of five accessions originally collected in Montana's Carbon and Stillwater Counties. The five accessions were selected because of their consistently tall stature, uniformity in seed maturity dates, and superior seed production. Stillwater Germplasm has been well received in the commercial seed industry and the availability of seed is growing (no pun intended).

By Susan R. Winslow, PMC Agronomist.

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