

# PLANT MATERIALS TODAY

A newsletter from the USDA-NRCS Montana-Wyoming Plant Materials Program for those interested in Plants and Conservation



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For more information on Plant Materials or for electronic access to this and other documents, access our web sites, [Montana NRCS](http://www.mt.nrcs.usda.gov) at <http://www.mt.nrcs.usda.gov> or [National Plant Materials Program](http://plant-materials.nrcs.usda.gov/mtpmc/) <http://plant-materials.nrcs.usda.gov/mtpmc/>. Direct inquiries to USDA-NRCS, Plant Materials Center, 98 South River Road, Bridger, MT 59014, phone: 406-662-3579, FAX: 855-510-7028. All photos by BPMC or Montana NRCS staff, or USDA or NRCS file photos, unless otherwise noted.

## **Important Reminders**

Here are a few seasonal reminders that might be of value to field staff and landowners alike:

- 1) Winter watering of trees and shrubs. Woody plants continue to lose moisture through their needles, scales, and even bark during the winter. As long as the ground is not frozen, continue to periodically apply light rates of supplemental water to trees and shrubs as needed, especially in areas receiving little to no natural fall moisture.
- 2) A reminder for field staff and landowners to be thinking about ordering conservation trees and shrubs for spring of 2016. Now is the time of year to secure your orders and have the best selection of trees and shrubs. The DNRC Montana Conservation Seedling Nursery is one nursery offering locally adapted seed sources and grows several Plant Materials selections.
- 3) Although it's still early, begin planning for late winter pruning of trees and shrubs. February and March are excellent months to remove dead, diseased, dangerous, rubbing, and deformed limbs from deciduous woody plants. At this time of year, the limbs are

visible and you don't have to deal with the extra weight of foliage.



Dormant season pruning.

## **Feature Topic**

### ***Recent BPMC Publications on the Web***

With the exceptionally busy year at the BPMC, we have been somewhat remiss in marketing our many written products of the Montana Plant Materials program. In 2015, we developed several publications of value to field staff and landowners.

- 1) The Bridger Plant Materials Center Year 2014 Progress Report of Activities. This yearly publication summarizes the

annual accomplishments of the Center and is an excellent overview of program priorities and activities. Also look for the Year 2015 report by this February.

- 2) Montana Plant Materials Technical Note MT-105, Sunflower *Helianthus* L. Native Sunflowers for Conservation Use in Montana and Wyoming. This document summarizes some of the valuable traits and conservation uses of several important native sunflowers.
- 3) Montana Plant Materials Technical Note MT-106, Radish *Raphanus sativus* L. An Introduced Cover Crop for Conservation Use in Montana and Wyoming. Radishes are a widely used and important cover crop species. This Technical Note describes the important differences between the various radish types and how to use them effectively in conservation practices for improving soil health.
- 4) Montana Plant Materials Technical Note MT-107, Russian Olive *Elaeagnus angustifolia* L. Effect of Seed Burial Depth on Seedling Emergence and Seed Viability. This papers summarizes the findings of a BPMC greenhouse study showing that seed burial depth has a critical impact on Russian olive seedling emergence and seed viability.
- 5) Montana Plant Materials Technical Note MT-108, New England Aster *Symphyotrichum novae-angliae* (L.) Nelson. A Native Forb for Conservation Use in Montana and Wyoming. This Technical Note describes the proper use of this important late bloom period forb.
- 6) Montana Plant Materials Technical Note MT-109, Restoring Perennial Grass Structure and Composition to

Cheatgrass Infested Rangeland and Pastures in Western Montana. This paper by Jim Jacobs, Plant Materials Specialist, summarizes the results of a field study comparing herbicide and reseeding treatments and provides best management guidance for the site conditions and treatments trialed in the study.

- 7) Montana Plant Materials Technical Note MT-110, Reducing Seed Dormancy in Silverleaf Phacelia (*Phacelia hastata*). This study and paper by Joe LeFebvre, DATR Project Leader, demonstrates the value of seed scarification in overcoming seed dormancy in this valuable pollinator and reclamation species.
- 8) Montana Plant Materials Technical Note MT-111, Stucky Ridge Comparative Evaluation Planting. This paper, also by Joe LeFebvre, summarizes the results of the largest replicated field study of the DATR project and provides valuable insight into plant species and variety performance on acid and heavy metal impacted sites near Anaconda, Montana.

Look for these and other publications on the Montana NRCS and Plant Materials websites.

**Joe Scianna - BPMC Manager/Horticulturist**

 **Staff News** 

### ***New Rangeland Management Specialist***

The Bridger PMC is glad to announce that Robert Kilian, most recently the rangeland management specialist for the Miles City Area Office, has been selected as the new rangeland management specialist at the Bridger Plant Materials Center.

Robert replaces Roger Hybner who retired in May.



Robert Kilian putting the final touches on the cottonwood deep pot study at Ft. Keogh.

Robert has a degree in Natural Resource Management with an emphasis in Range Ecology and Wildlife Habitat from Arizona State University. He has almost 24 years of experience in conservation planning with NRCS in Washington, Colorado, and Montana.

Robert will be responsible for leadership in BPMC field operations and rangeland health research.

**🌿 Technician's Tip 🌿**

***So What Do You Guys Do All Winter?***

The technicians at the Center are often asked, "...so what do you guys do all winter?" While the office staff prepares business plans, study reports, and papers, BPMC technicians are busy processing seed from the previous growing season, propagating plants in the greenhouse, and maintaining and repairing farming equipment for the upcoming growing season.

Seed processing (cleaning) begins in November. We clean Foundation seed of our releases, seed of promising test collections or "seed increase", as well as wildland (uncultivated) seed collected



Early seed cleaning technologies.

by field staff and collaborators. Lot size can vary from one ton to less than one gram. In many cases, seeds are so small a dissecting microscope is needed to identify the seeds versus the chaff. Seed cleaning has advanced significantly over the years, with the development of better and more sophisticated technologies, such as the color texture sorter and indent cylinder. On an



Indent cylinder seed cleaner.

average year, we clean approximately 200 to 250 individual lots, and the entire operation takes about 3 months.

In the greenhouse, we sow trays of seed to be placed in our cooler in order to simulate the winter conditions needed to break seed dormancy. In late winter, we often prepare



Preparing dormant hardwood cuttings.

dormant hardwood cuttings and place them in the greenhouse under mist in order to stimulate adventitious rooting.

In February we move to the shop to begin servicing our tractors, combines, swather, seed cleaners, and other motorized equipment. We maintain and service numerous pieces of farming equipment, and even fabricate our own

specialized implements. Given normal weather patterns for Bridger, winter conditions typically break in late March and we return once again to the field, as weather allows, to begin farming.



Large seed cleaning mill being repaired.

There's never a dull moment!

**Darren Zentner, Ross Oyler, and Robert Fisher -  
BPMC Biological Technicians**

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