

Aberdeen Plant Materials Center Intermountain Plant Notes

2008



Website: <http://plant-materials.nrcs.usda.gov>



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A newsletter to inform you about activities at the Aberdeen Plant Materials Center

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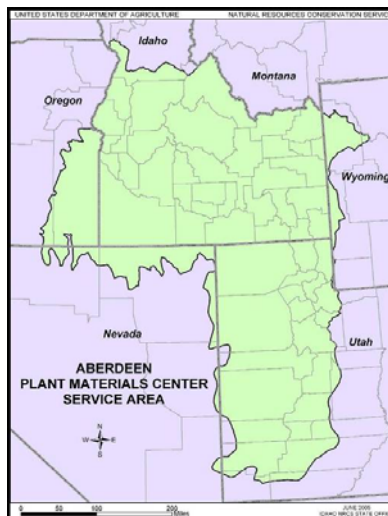
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Who We Are

The Aberdeen Plant Materials Center (PMC) was established in 1939 to develop plant materials and techniques for establishment and management of plants for use in resource conservation activities in the Western United States. Currently, there are 27 Plant Materials Centers nationwide, each serving a specific geographic and ecological area. The Aberdeen PMC service area covers 83 million acres of the Intermountain West encompassing southern Idaho, western Utah and parts of northern Nevada, western Wyoming and southeastern Oregon.



Grass Display Nursery

The Aberdeen Grass Display Nursery was planted August 14, 2007 in cooperation with the South Bingham Soil Conservation District. The purpose of the display nursery is to allow the public to view grasses used to conserve soil, provide forage for livestock and wildlife, habitat for wildlife and to improve water quality. The nursery includes 65 accessions showcasing released grasses (and some currently in testing evaluations) of over 30 species suited for reclamation, restoration or irrigated pasture plantings in the Aberdeen PMC service area. The display is divided into three sections according to irrigation needs or reflecting natural precipitation ranges; 12 inches or less, 12 to 16 inches, and 16 inches or greater. The nursery is a wonderful tool for land managers, cooperators and field office staff to see mature stands of the species that they may be considering for planting projects.

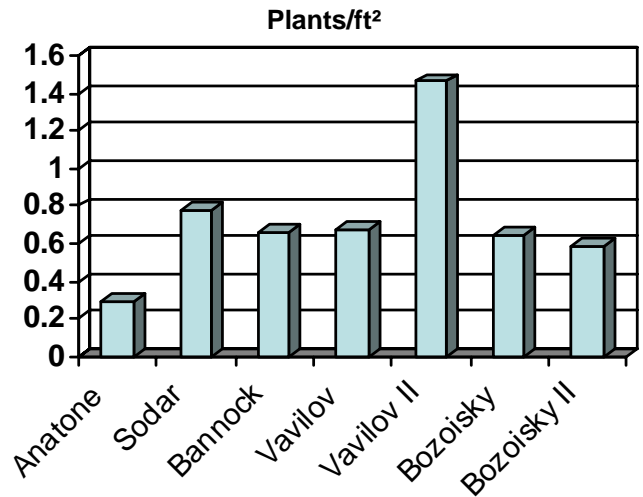


Skull Valley Off-Center Evaluation

In November 2007, the PMC planted a new off-center evaluation planting at Skull Valley, UT, 25 miles west of Tooele. The site is a semi-desert gravelly loam with 8-12 inch annual precipitation. The study contains 72 accessions of 23 species planted in 3 replications. The planting will be used to evaluate new plant releases and test materials against commonly used releases. This planting will also be useful in determining the range of adaptation for species and releases from distant locations. Evaluations will begin this spring and continue for many years. The PMC appreciates local coordination by the Tooele Field Office.

Coffee Point Off-Center Evaluation

In 2006 the PMC planted an off-center-evaluation at Coffee Point located 25 miles northwest of Aberdeen. The site was historically a Wyoming big sagebrush community and receives 8-12 inches annual precipitation. The trial contains 58 accessions of 23 species. Evaluations of establishment density showed a number of releases adapted to the harsh conditions at the site. 'Vavilov II', a new release of Siberian wheatgrass showed excellent qualities for establishment in low precipitation sites. The chart to the right shows plant density of some of the best performing accessions as of September 2007. Evaluations will continue over the next 10 years to determine long term performance.



Wild Buckwheat Initial Evaluation Planting

During the fall of 2006, the PMC planted 32 accessions of sulphur-flower and parsnipflower, or whorled buckwheat, in an initial evaluation trial at the new Pearl Farm. The trial includes 10 accessions of sulphur-flower and 22 accessions of parsnipflower buckwheat collected from native stands in Idaho, Wyoming, California and Oregon. Due to problems with soil crusting and very limited rainfall, the 2006 trial had essentially no germination. Last fall a second trial was planted into weed barrier fabric at the PMC home farm. These accessions will be evaluated over the next 3 years with the intention of making a selected-class release from one or both species.



Zeba™ Product Evaluation

Last fall, at the Utah Skull Valley test site, we planted a trial to evaluate Zeba™, a cornstarch based soil amendment designed to improve soil water retention during establishment. Zeba is said to absorb up to 400 times its original weight in water and then slowly release just the right amount of moisture in response to plant root suction. This process is repeated hundreds of times over a growing season before Zeba loses effectiveness. The trial includes three formulations of the product, a large granule (left), a smaller grain, and coated seed. This trial is evaluating Indian ricegrass and bluebunch wheatgrass with these product formulations. The plots will be evaluated for establishment and seedling vigor in 2008.

Seed Production for Grand Teton National Park

The PMC has an agreement with Grand Teton National Park to produce seed of several native grass species to revegetate disturbed park lands. In the spring of 2006 the PMC planted 2.7 acres of blue wildrye (right), 0.25 acres of Sandberg bluegrass, 1.0 acre of mountain brome and 1.0 acre of slender wheatgrass. Seed harvest began in 2007 and will continue through 2008. This year the PMC will also be planting new fields of Idaho fescue and bluebunch wheatgrass for additional seed production. Harvest for these two species will begin in 2009.



Release of 'Vavilov II' Siberian Wheatgrass

The Aberdeen PMC is cooperating in the release of 'Vavilov II' Siberian wheatgrass. This is a joint release involving the United States Army, Utah State Agricultural Experiment Station, and the USDA Agricultural Research Service. Vavilov II is intended for use on arid and semiarid rangelands in the Intermountain West, Great Basin and Northern Great Plains. It was selected for persistence, and overall plant and seedling vigor in response to drought. Vavilov II expands the genetic base of 'Vavilov' and is an improvement in seedling establishment, vigor and forage yields of its predecessor.



Foundation/Early Generation Seed Production

A major responsibility of the PMC is the production of Foundation seed of the center's plant releases. In 2007, the PMC produced over 7,000 lbs of Foundation seed of Vavilov II Siberian wheatgrass, Anatone bluebunch wheatgrass, Snake River Plains four-wing saltbush, Northern Cold Desert winterfat, Delar small burnet, Richfield firecracker penstemon, Clearwater venus penstemon, Bannock thickspike wheatgrass, Magnar basin wildrye, and Goldar bluebunch wheatgrass. In 2007 the PMC shipped just over 3,800 lbs of seed through the Utah Crop Improvement Association and the Idaho Foundation Seed program. In 2008 the PMC is maintaining Foundation seed production fields of Anatone, Snake River Plains, Northern Cold Desert, Maple Grove, Richfield, Clearwater, Bannock, Magnar, Goldar, Rush, Appar Nezpar Indian ricegrass and Sodar streambank wheatgrass. Contact the University of Idaho Foundation Seed Program or the Utah Crop Improvement Association to request Foundation/early generation Certified seed.

Forb Herbicide Tolerance Trials



In 2006 the PMC cooperated with the University of Idaho in an evaluation of herbicide tolerance and weed control effectiveness in a seed production field of Maple Grove Lewis flax. Fourteen treatments including a control were applied in 24 x 75' plots with three replications. The picture to the left shows a plot treated with Plateau. Note the lack of flowers in the plot compared to surrounding plots. Good results were obtained from Prowl and with a mixture of Stinger and Targa. These results may be used to develop label recommendations for herbicide use on forb seed production fields. Contact the PMC for a copy of the full report.

Native Species Evaluations

There are several initial and advanced test plantings in various stages currently underway at the PMC investigating native plant collections for potential releases. The PMC is evaluating collections of mountain brome and slender wheatgrass in cooperation with USDA Forest Service Region 4. We are also evaluating seed production of some forbs in cooperation with the USFS Rocky Mountain Research Station. These include accessions of sulphur-flower buckwheat (right), hotrock penstemon, sagebrush penstemon, sharpleaf penstemon, fernleaf biscuitroot, Gray's biscuitroot and nine-leaf biscuitroot.



Call for Seed Collections



The PMC is planning to begin initial evaluations of Douglas' dustymaiden (left) and hoary tansyaster (right) starting in the spring of 2008. We are looking for seed collections or stand location information so PMC staff can visit sites and collect seed this summer.

These are two short-lived perennial forbs common to the Intermountain West. Both species are commonly found growing in arid sites in a wide range of soils in sagebrush habitats throughout our service area. Dustymaiden flowers in early June, and seed is ready for harvest throughout July. Hoary tansyaster typically flowers later in the season with seed becoming ripe during August and into September. Contact Derek Tilley at the PMC or Dan Ogle at the ID State Office for more information or to provide site locations.



We also hope to begin an evaluation of the Nevada type Sandberg bluegrass. We will be making collections this summer and coordinating with other agencies to obtain collections of this species to evaluate from a broad ecological range.

Recent Publications and Presentations

There are several new or revised publications from the Aberdeen PMC available to download at our website.

Some of these include:

- Plant Guides for cicer milkvetch (*Astragalus cicer*), sainfoin (*Onobrychis viciifolia*), and halogeton (*Halogeton glomeratus*)
- Field Guide for the Identification and Use of Common Riparian Woody Plants of the Intermountain West and Pacific Northwest Regions.
- Technical Note 20. Calibrating the Truax Rough Rider Drill for Restoration Plantings.
- Technical Note 30. Perennial Ryegrass for Irrigated Pastures in the Intermountain West.

The PMC staff also gave a number of presentations and tours including:

- Plant Improvement, Variety Development and Variety Selection. University of Idaho Forage and Pasture Training.
- Plant Materials Selection and Seeding Practices for Rangeland Revegetation. Eastern Idaho Weed Control Association Annual Meeting.
- Growing Grass and Forb Seed. Utah Crop Improvement Association Seed School.