



United States Department of Agriculture
Natural Resources Conservation Service

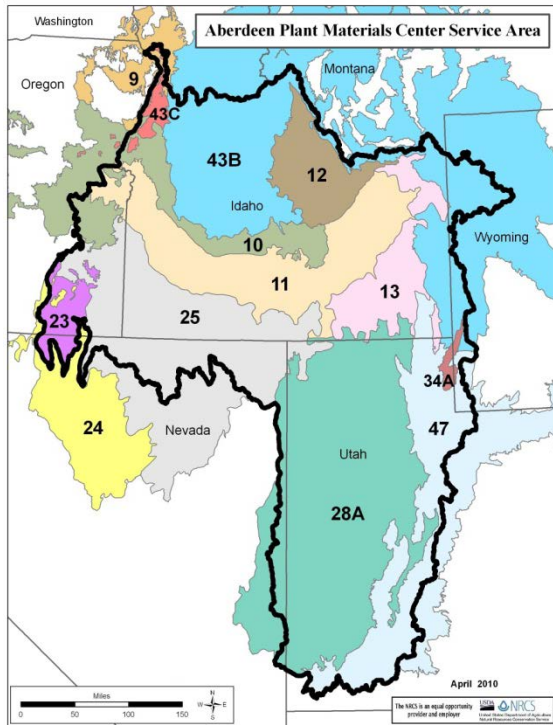
ABERDEEN PLANT MATERIALS CENTER



INTERMOUNTAIN PLANT NOTES

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

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. There are 27 Plant Materials Centers nationwide, each serving specific geographic and ecological areas. 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 eastern Oregon.



PMC service area map with overlay of Major Land Resource Areas (MLRAs).

Foundation/Early Generation Certified Seed Production

A major responsibility of the PMC is the production of Foundation and early generation Certified Seed of the plant releases made by the Center. The

releases currently in production are: 'Recovery' western wheatgrass, Maple Grove Lewis flax, 'Appar' blue flax, and 'Goldar' and Anatone bluebunch wheatgrass. Seed growers may contact the University of Idaho Foundation Seed Program or the Utah Crop Improvement Association to request Foundation or early generation Certified seed.



Harvesting grass at the PMC Home Farm.

Discontinued Releases

Due to lack of interest by seed growers and users, the PMC has officially discontinued the maintenance of two shrub releases and 24 wetland plant releases. Northern Cold Desert winterfat and Snake River Plains fourwing saltbush seed will no longer be maintained at the PMC or be available through Utah Crop Improvement or the Idaho Foundation Seed Program. Wetland plant releases of Nebraska sedge, alkali bulrush, hardstem bulrush, common three-square, Baltic rush, and creeping spikerush have also been discontinued.

Cooperative Seed and Plant Production Projects

Yellowstone National Park

The PMC is producing seed for the conversion of historical agricultural lands in Yellowstone National Park back to native rangeland. Seed production

fields of Sandberg bluegrass (*Poa secunda*), bluebunch wheatgrass (*Pseudoroegneria spicata*) and needle-and-thread (*Hesperostipa comata*) were planted in 2009 and harvested for seed in 2010 -2012. New fields for bluebunch wheatgrass and Sandberg bluegrass will be planted in 2013.

Grand Teton National Park

The PMC is also producing seed of native grasses for use in restoration projects in Grand Teton National Park. Species currently under production include mountain brome (*Bromus marginatus*) and Idaho fescue (*Festuca idahoensis*).

Plant Evaluations

The PMC is in the early stages of seed production prior to the official release of Douglas' dustymaiden (*Chaenactis douglasii*), hoary tansyaster (*Machaeranthera canescens*) and whorled buckwheat (*Eriogonum heracleoides*). The initial evaluations for these species were completed in 2010 and the best rated accessions were identified for seed increase and release. These native forbs are important food sources for pollinators and will benefit sage-grouse habitat restoration. These accessions will be officially released to growers when the PMC has bulked up enough seed to satisfy expected demands.

Aberdeen PMC is cooperating with plant scientists from the USDA ARS Forage and Range Research Laboratory in Logan, Utah to evaluate the release of Searls' prairie clover (*Dalea searlsiae*). Searls' prairie clover is a native non-bloat legume that grows in Utah, Arizona and Nevada. The PMC is currently evaluating seed production and increasing the seed inventory from transplanted stock.

In 2010, the PMC installed a common- garden initial evaluation study of Nevada type *Poa secunda*, a larger statured relative of Sandberg bluegrass with applications for range seedings. Thirty-four Nevada bluegrass accessions were collected in 2008 for initial evaluation and potential pre-variety selected class release. The collections are being evaluated for traits such as establishment, forage production and seed yield.

The PMC is cooperating with the USDA-ARS Forage and Range Lab, the USDA Rocky Mountain Research Station Shrub Science Lab and the Utah Division of Wildlife Resources to identify an accession of Lewis flax (*Linum lewisii*) with

improved seedling vigor and seed production capabilities that may perform better than Maple Grove Selected Class Germplasm. Thirty-seven accessions were grown in the PMC greenhouse this spring and transplanted to study sites at Logan and Fountain Green, Utah this summer.

Display Plantings

Pollinator Display

In May of 2011, the PMC planted 5 acres of pollinator habitat at the Fish and Game Farm located 5 miles northeast of Aberdeen. The planting contains a mixture of three grasses and seven forbs chosen to provide a variety of flower shapes and colors throughout the growing season. The whole planting is irrigated to simulate a 14 to 16 inch precipitation area. The display will be used to develop management strategies for use in pollinator and wildlife friendly plantings. It is also a good visual tool for NRCS field office staff and other land managers.

New grass display

This summer the PMC installed a new multi-species grass display nursery at the PMC Home Farm. The new display contains 56 accessions of 32 species used in range and pasture plantings in the Intermountain West. The display is arranged by species in order of water needs and is an excellent tool for observing species and releases. Contact the PMC for a guided tour.

Curlew National Grassland

In the fall of 2010, PMC staff planted a multi-species off-center evaluation on the USDA-FS Curlew National Grassland located 30 miles south of American Falls, Idaho in cooperation with the Caribou/Targhee National Forest. The trial includes over 60 accessions of primarily native grasses, forbs and shrubs adapted for use in MLRA 13 Eastern Idaho Plateaus (13 to 18 inch plus precipitation areas). The PMC is evaluating the plots for establishment and performance. For more information or to arrange a site visit, contact the PMC.

Technology Development

Cottonwood Rooting

The PMC has received questions over the years as to the best depth in which to plant dormant

cottonwood (*Populus* spp.) cuttings. This year the PMC conducted a study comparing cottonwood establishment at different depths in relation to the water table. We found that cottonwood cuttings planted with a portion of the cutting in permanent water will establish as well as cuttings placed into the capillary fringe. However the portion of the cutting in permanent water will die leaving only the portion of the cutting in the capillary fringe actively growing and producing roots.



A cottonwood cutting that was placed with the bottom 20 cm in permanent water. The bark had sloughed off and died in the bottom portion of the cutting, but did not affect root growth on the portion of cutting in the capillary fringe.

Cottonwoods grow naturally in areas with a deep water table and a large portion of the root system in the capillary fringe zone. Planting cottonwoods in the correct location in relation to the stream channel is vital to establishment and long term survival. Deep planting into the permanent water table ensures that some of the cutting will be in the capillary fringe even if the water table drops, but the cutting should not be negatively affected if the lower portion of the cutting remains in permanent water.

Agricultural Land Management Alternative with Numerical Assessment Criteria (ALMANAC) Project

PMCs located in Arizona, New Mexico, Nevada, Washington, Idaho, California, Colorado, and Montana are participating in a cooperative study

with USDA ARS scientists in Temple, Texas. The purpose of the ALMANAC study is to develop methods that will allow NRCS to better estimate environmental benefits and effects of NRCS conservation practices. PMCs have been gathering plant growth data such as leaf area, light interception and biomass production which is being analyzed by ARS staff for inclusion in the ALMANAC model.

Willow Cutting Storage

Does this sound familiar? "I've got 10,000 willow cuttings ready for a streambank project, but the construction crew is facing delays. How long can I store my cuttings without losing viability?" The PMC is working to answer this question by testing storage longevity of three native willow species: peachleaf willow (*Salix amygdaloides*), coyote willow (*S. exigua*), and yellow willow (*S. lutea*). This project is nearing completion, and the information will be available soon.

Plant Materials Field Planting Program

The Plant Materials Specialist and PMC coordinate with Field Office staff to install non-replicated, small acreage plantings to assess the conservation potential of new or developing plant materials and technology under actual field conditions. Field plantings are an excellent way to complete final evaluations of promising plant materials under real life (farmer installed with actual farm equipment) conditions. The plant materials program depends on field office and landowner participation to field-test new selections of grasses, forbs, and woody plants and the best methods to get them established. Have a good potential planting project? Seed may be available for small field plantings or demonstrations. Contact the PMC or the Plant Materials Specialist.

Public Information Activities

New, Revised or Updated PM Technical Notes

- TN 2a: Plants for Pollinators in the Intermountain West
- TN 2b: Plants for Pollinators in the Inland Northwest
- TN 10: Pasture and Range Seeding
- TN 12: Guidelines for Determining Stand Establishment

- TN 13: Principles of Seedbed Preparation
- TN 17: Field and Demonstration Plantings
- TN 24: Conservation Plant Species for the Intermountain West
- TN 28: PM Glossary
- TN 33: Plant and Seed Vendors for Idaho, Montana, Nevada, Eastern Oregon, Utah, Eastern Washington, Wyoming
- TN 38: Description, Propagation and Establishment of Wetland-Riparian Grass and Grass-like Species in the Intermountain West
- TN 41: Restoration of Plant Communities with Woody Plants
- TN 43: Tree and Shrub Plantings
- TN 51: Threatened, Endangered, Candidate & Proposed Plant Species of Idaho (Plant Guides)

Plant Guides

- Fernleaf biscuitroot
- Gooseberryleaf globemallow
- Tapertip hawksbeard
- Blue penstemon
- Yellow spiderflower
- Whitebark pine
- Arrowleaf balsamroot
- Lobeleaf groundsel
- Red fescue
- Firecracker penstemon (rev.)
- Venus penstemon (rev.)
- Lambstongue ragwort
- Canada bluegrass
- Black sagebrush
- Annual agoseris
- Forage kochia (rev.)
- Tall blacktip ragwort
- Woolly groundsel
- Rocky Mountain groundsel
- Little (low) sagebrush
- Cutleaf balsamroot
- Yellow rabbitbrush
- Purple oniongrass
- Galleta grass
- Spineless horsebrush
- Barestem biscuitroot
- Lupine spp.

Propagation Protocols (found at <http://nativeplants.for.uidaho.edu/>)

- Dune scurfpea

- Fernleaf biscuitroot
- Nineleaf biscuitroot
- Gray's biscuitroot
- Searls' prairie clover

Presentations

- Area East Stream Planning and Assessment, Pocatello, Idaho
- Great Basin Native Plant Selection and Increase Project, Salt Lake City, Utah
- Utah Association of Conservation Districts Zone 7, Dutch John, Utah
- Yellowstone National Park Revegetation Group, Livingston, Montana
- Wetland Plant Identification for Wetland Delineators, Aberdeen, Idaho
- Big Desert Sage Grouse Working Group, Aberdeen, Idaho
- Curlew Off-Center Planting Tour, Curlew National Grassland
- Range Drill Calibration and Operation Workshop, Snake River Birds of Prey, Idaho

Plant Materials Team and Contact Information

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