Aberdeen Plant Materials Center Home Farm

Who We Are
The mission of the USDA NRCS Plant Materials Program is to develop and transfer effective state-of-the-art plant science technology to meet customer and resource needs. The Aberdeen Plant Materials Center (PMC) was established in 1939 to evaluate and select plant materials and techniques for establishment and management of plants for use in resource conservation activities in the Western United States.

There are 25 PMCs nationwide, each serving a specific geographic and ecological area. The Aberdeen PMC serves portions of the Intermountain West including southern Idaho, western Utah, northern Nevada, western Wyoming and eastern Oregon.

Aberdeen’s primary areas of focus are improving habitat for at-risk wildlife species such as sage-grouse, improving range and pasture productivity, and increasing plant species diversity on Intermountain rangelands. We are also investigating plants and technologies for improving soil health in Intermountain agricultural lands.

For more information on any PMC projects, please call or email the center with the information at the top of the page.

Native Forbs
The PMC is continuing its work to develop native forb releases for use in habitat plantings for pollinators, sage-grouse and other wildlife. We recently released Soda Springs Germplasm parsnipflower buckwheat (Eriogonum heracleoides) from southeast Idaho. It has been tested at the PMC as well as at off-center sites in Virginia, ID, and in Spanish Fork and Clarkston, UT. This will be a valuable forb/subshrub in the sagebrush steppe and for pollinator plantings in basin and mountain sagebrush and bitterbrush ecological sites. This year, the PMC produced a good quantity of seed which should be enough to supply initial demand. Seed allocations will be available through Utah Crop Improvement and the Idaho Foundation Seed Program.

Gumweed Initial Evaluation Planting
To many, curlycup gumweed (Grindelia squarrosa) is a common nuisance along roadsides and poorly managed rangeland, but we think it might just be an excellent conservation plant. Curlycup gumweed is a short-lived native forb that flowers late in the growing season providing a tremendous resource to native bees. The leaves are also a preferred forage of sage-grouse chicks. Its ability to invade disturbed sites, even those occupied by cheatgrass, make it an excellent candidate for pollinator and wildlife plantings in arid to semi-arid sites throughout our range.

We are evaluating 25 accessions from sites throughout the Great Basin in Oregon, Idaho, Wyoming, Nevada and Utah for establishment, seedling vigor, blooming period and seed production.
Curlycup gumweed is a native forb with potential for use in pollinator and wildlife habitat plantings in the Great Basin.

Milkweed Establishment and Management
The PMC is looking at techniques to establish and manage milkweed habitat for monarch butterfly conservation. In one study, we examined the feasibility of using rhizome sections for establishment. We sorted rhizome pieces into various size categories ranging from very small pieces only 1/8 inch thick to large root chunks. We found nearly all to be viable and able to produce healthy plants. Rhizome transplants may be an easy and cost effective method to establish small localized populations of milkweed in pollinator gardens and other monarch visiting sites.

Showy milkweed rhizome sections were cut into various sizes. All sizes exhibited fair to excellent viability.

This single showy milkweed rhizome could be divided to establish dozens of new plants.

We are also comparing different establishment methods in a PMC field trial. We compared seeding in the fall and spring with using greenhouse grown materials as well as transplanting freshly harvested rhizomes. We’re also
looking at ways to reduce competition and encourage milkweed growth with mowing and disking treatments.

**Forb Establishment Study (The Forb Island Snow Fence Project)**

New technologies have become available that may improve establishment rates of native forbs by trapping available moisture. Snow fences and floating row cover fabric that trap moisture have the potential to be used to establish forb islands (distinct focal areas where forbs are established). These forb islands could be sources of seed for the colonization of adjacent rangeland areas in subsequent years. The PMC is cooperating in a study with the Forest Service Shrub Science Lab, ARS Forage and Range Research Lab, Utah State University and Brigham Young University to determine if these techniques, in combination with seed treatments such as hydrophobic coatings and fungicide applications, can be used to successfully establish important Great Basin forbs in islands at three sites in Utah and Idaho.

**Cover Crop Variety Trial**

Aberdeen is participating in a multi-PMC trial of several varieties of commonly used cover crop species in an effort to develop accurate recommendations for different regions. Species being tested at Aberdeen include hairy vetch, balansa clover, red clover, crimson clover, radish and black oat. The initial trial was established in 2015, and further replications were planted in 2016 and 2017. We have been recording data for establishment and production this summer and will get survival and other data in the spring.

**Breeder, Foundation, and Cooperative Seed Production**

The Aberdeen PMC produces the highest quality conservation seed available and is responsible for the production of Breeder and Foundation seed of 15 plant releases. In 2017, the PMC had seed production fields of Tegmar intermediate wheatgrass, Amethyst hoary tansyaster, Anatone bluebunch wheatgrass, Sodar streambank wheatgrass, Vavilov II Siberian wheatgrass, Richfield firecracker penstemon, Goldar bluebunch wheatgrass, Maple Grove Lewis flax, Magnar basin wildrye, Recovery western wheatgrass, Ephraim crested wheatgrass, and Rush intermediate wheatgrass. Seed growers should contact the University of Idaho Foundation Seed program or the Utah Crop Improvement Association to request Foundation or early generation Certified seed.

**National Park Service**

The PMC has been working with Yellowstone National Park since 2009 to produce seed for restoration efforts in the park. In 2017 we produced seed of Sandberg bluegrass and bluebunch wheatgrass. The grasses are being used to restore lands within the park that had previously been in production agriculture many years ago.

The PMC is similarly working with Grand Teton National Park to increase seed of source collections from the park to be used for restoration projects. The PMC is currently growing Idaho fescue, blue wildrye, mountain brome and two native forbs: sulphur-flower buckwheat, and showy.
goldeneye, for restoring lands that were previously in production agriculture.

In 2016 the PMC began a new project growing containerized rushes and sedges and other wet meadow species for Yosemite National Park. The park is relocating a parking lot currently located in the floodplain of the Merced River. Approximately 4 acres of former parking lot site area is to be restored to black oak woodland and palustrine wetland within the riparian buffer. So far we have delivered approximately 22,000 wetland plants to the Park, including milkweed, goldenrod, penstemon, and several species of sedges.

Greenhouse grown wetland plants almost ready for delivery to Yosemite National Park.

PMC grown plants in a temporary holding pen prior to outplanting at Yosemite National Park.

Products and Technology Transfer

Training and Presentations
- Identification of Intermountain Triticeae
- Intermountain Grass Identification for BLM
- Plant Materials for Cheatgrass Sites

Technical Notes
- ID Plant Materials TN 2a (revision). Plants for Pollinators in the Intermountain West.
- ID Plant Materials TN 67. Cover Crops for the Intermountain West.
- ID Plant Materials TN 68. Alternative Seeding Configurations
- ID Plant Materials TN 69. Calibrating a Seed Drill for Cover Crop Mixtures
- ID Plant Materials TN 7a (revision). Mixing Seed with Rice Hulls, Rice Hull Calculator

Plant Guides
- Basalt milkvetch
- Japanese yew
- Scarlet gilia
- Searls’ prairie clover

Propagation Protocols
- Nettleleaf giant hyssop
- Douglas’ sagewort
- Showy milkweed
- Greensheath sedge
- Western goldentop
- Common rush
- Rydberg’s penstemon
- Panicled bulrush
- Showy goldeneye

Popular Articles

Website
All Aberdeen PMC publications can be downloaded from the following web-sites:

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER