

## 2002 Aberdeen Plant Materials Center Progress Report of Activities

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*Aberdeen Plant Materials Center office and greenhouse*



### Who We Are

The mission of the 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 develop plant materials and techniques for establishment and management of plants for use in resource conservation activities in the Western United States.

There are 26 PMCs nationwide, each serving a particular geographic area. The Aberdeen PMC serves the portions of the Intermountain West including southern Idaho, western Utah, Nevada, northeastern California, and southeastern Oregon.

### Program Emphasis

The activities of the Aberdeen PMC are guided by a long-range plan. The priority work areas are:

- Plant Releases, seed and plant production

- Rangeland in poor ecological condition
- Riparian and wetland degradation
- Agroforestry
- Technology transfer and education

This document highlights some of the major activities at the PMC during 2002. For detailed information, contact the staff at the PMC or the Idaho-Utah Plant Materials Specialist.

### Herbicide Trials

The PMC has been cooperating with the University of Idaho to evaluate herbicides that can be used on rangeland to control weeds during the establishment of seedings. One of the trials conducted was to observe the effects of Plateau® herbicide on established perennial grasses that had been burned. The evaluation was conducted during the 2001-growing season on 54 accessions of grasses in the display nursery at the PMC Home Farm. The photograph below shows the effects of the herbicide application.



One half of each plot (right hand side of photo) was sprayed. Plant height was reduced 40 to 60 percent from the herbicide application. Dry matter forage yield was reduced 30 to 60 percent

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and the herbicide killed several varieties. The herbicide application delayed initial spring growth and the forage in the treated plots was finer stemmed and less coarse which corresponded to the forage quality data that was also collected.

### Maple Grove Flax

In 1980, the United States Department of Agriculture, Shrub Sciences Laboratory, Provo, Utah and the Aberdeen PMC cooperatively released 'Appar' blue flax. Appar is recommended as a component of a seed mixture to provide diversity and beauty. It was originally identified as a native species to North America but was later determined to be an introduced species from Europe. The Shrub Sciences Laboratory has been evaluating native blue flax accessions and requested the PMC to assist in a study to compare Appar to one of the more promising native collections.



The PMC has been comparing Appar to an accession that was originally collected near Maple Grove, Utah. Maple Grove produces 70 to 90 percent as much seed as Appar, an important consideration for seed growers. It is anticipated that Maple Grove will be released as a selected class germplasm to be available to seed growers in early 2004.

### Trout Creek, Nevada Off-Center Upland Test Site Evaluated

The PMC recently evaluated the off-center upland test site at Trout Creek, Nevada that was seeded in November, 1987. The purpose of the planting was to evaluate the potential of grasses and shrubs for revegetation and forage for livestock and wildlife in areas of 8 - 12 inches annual



precipitation in northeastern Nevada and south central Idaho.

As a group, the crested wheatgrass accessions have the best stands fifteen years after the site was planted. The native wildrye accessions had the next best stands followed by Russian wildrye accessions. Indian ricegrass accessions had no stands remaining fifteen years after planting.

### Breeder and Foundation Seed Production

The PMC is responsible for Breeder and Foundation seed production of 17 plant releases. During 2002, the PMC had Foundation seed fields of 'Magnar' basin wildrye, 'Goldar' bluebunch wheatgrass, 'Nezpar' Indian ricegrass, 'Paiute' orchardgrass, 'Bannock' thickspike wheatgrass, 'Delar' small burnet, Richfield Selection firecracker penstemon, Clearwater Selection Venus pentsemon, Northern Cold Desert Selection winterfat and Snake River Plains Selection fourwing saltbush. Anatone bluebunch wheatgrass and Maple Grove flax fields were also established.

Certified Foundation seed of the releases from the PMC are provided to seed growers through the University of Idaho Foundation Seed Stocks Program and the Utah Crop Improvement Association.





**Interagency Riparian/Wetland Plant Development Project**

The Interagency Riparian/Wetland Plant Development Project was established in 1991. NRCS and several federal, state, local, and private organizations decided that they needed more information on how to propagate and plant riparian and wetland plants, how to establish and maintain wetland and riparian vegetation in artificial situations, and other uses related to water quality improvement.

**Riparian Ecology and Restoration Workshops**

As part of our technology transfer program, a two-day Riparian Ecology and Restoration Management Workshop was developed. The first day of the workshop is devoted to the classroom where basic riparian dynamics, riparian zone vegetation, plant acquisition, and bioengineering techniques are discussed. The second day is spent at a field location where participants classify the riparian site and install a series of bioengineering treatments on an eroding section of streambank.



Each year the Project conducts several workshops in different parts of our service area. This year workshops were held in Bend, OR for the Deschutes Land Trust and at Malheur National Wildlife Refuge south of Burns, OR.

In Bend, we trained volunteers for the Deschutes Basin Land Trust who were interested in streambank bioengineering on streams in the Deschutes Basin.

At Malheur NWR, planting and bioengineering recommendations were made for the realignment of the Donner and Blitzen River to enhance fish habitat.



**Wetland Enhancement to improve Northern Leopard Frog Habitat on the Pyramid Lake Shoshone Paiute Tribal Lands**



In March, the project assisted the Pyramid Lake Shoshone-Paiute tribe and Nevada NRCS in the development of additional habitat for the northern leopard frog (*Rana pipiens*). Consultants designed construction aspects of the wetland to improve the habitat components for the northern leopard frog and the project designed the vegetative components. Volunteers from a variety of organizations and tribal employees spent several days planting a variety of native wetland plants collected from adjacent areas.



After one growing season, the plants have established and filled in. Over the course of the summer, additional frogs have been observed in the new wetland.

### Native American Native Plant Nursery Conference



In June, Chris Hoag presented two papers on propagation of Nebraska Sedge and the use of the waterjet stinger to plant hardwood cuttings. Representatives from Tribal native plant nurseries from throughout the country attended a two day session on how to operate a native plant nursery and how to propagate a wide variety of native plants.

### Homedale High School Constructed Wetland System and Outdoor Classroom



In May, assistance was provided to the Homedale, Idaho School District and the Southwest Idaho RC& D in the design and planting of a Constructed Wetland System. The system will treat irrigation wastewater from farmland owned by the school district. The wetland will also serve as an outdoor classroom for the students in the Homedale School District. The students will learn about wetlands, wetland

plants, water quality issues, invertebrate populations, and wildlife that use wetlands. The installation of the system also demonstrates that the school district, as a landowner, is interested in protecting surface and ground water.



### Waterjet Stinger Trailer

The waterjet stinger was originally designed to fit on the back of a large 4-wheeler. In field trials, we found that there wasn't much room for the ATV driver. Boyd Simonson developed a trailer that would attach to the 4-wheeler and pack all of the parts and pieces of the waterjet stinger. He also added barrels to carry cuttings. Now the entire waterjet stinger can be hauled to the site and up and down the stream planting section. The pump can be operated on the trailer or dismantled and placed on the streambank. When the planting is completed, the trailer with all the equipment can be loaded into a pickup truck. The PMC plans to develop a Technical Note that will include design specifications and a cost estimate.



Check out the Riparian/Wetland Project web page attached to <http://plant-materials.nrcs.usda.gov/idpmc> for further information and more papers on wetland and riparian plants and management.