



Corvallis Plant Materials Center 2005/6 Progress Report of Activities

3415 NE Granger Avenue, Corvallis, OR 97330, Tel: 541-757-4812, FAX: 541-757-4733
 ✓ Web site: <http://Plant-Materials.nrcs.usda.gov>

Development of vegetative solutions for conservation problems is a primary function of the USDA NRCS Plant Materials (PM) program. The Corvallis (Oregon) Plant Materials Center (PMC) is one of 26 centers nationally and serves western Oregon, western Washington, and northwestern California. The PMC's primary mission is to develop new technology in plant propagation and establishment, seed production, revegetation, restoration, and erosion control, and to test and release new plant sources for use in riparian areas, wetlands, and uplands. Most of the focus is on native grasses, forbs, and shrubs.



This flail-vac seed stripper uses a high speed brush to strip seed off the heads of grasses and dry flower stalks of forbs. It is controlled like the bucket on a front end loader. The unit has proven to be effective for harvesting several species.

The principal program customers include:

- ✓ NRCS field offices, who in turn serve both rural and urban land owners, farmers, ranchers and other land managers,
- ✓ Public agencies, universities, Tribes, and private conservation organizations that utilize technology and plants selected or produced by the program, and
- ✓ Commercial seed producers and nurseries who receive information on production technology as well as seed and plants of selected species for further increase.

PLANT EVALUATIONS AND RELEASE

Wild populations of plants are collected, propagated, and selected for their physical attributes, area of adaptation, potential performance, or documented capabilities from a series of evaluations aimed at addressing conservation needs. Purposeful selection can be important for farm or related pragmatic uses such as erosion control, forage, seed production, windbreaks, or water quality improvement. However, species are not bred or hybridized and genetic changes are intentionally minimized when ecological restoration is the primary goal.

Studies may begin with assemblies of numerous ecotypes and the establishment of an initial evaluation planting or common garden. After populations are chosen from

Contents	Page
Plant Evaluations and Release_____	1
Plant Technology and Increases_____	3
Partnerships with Other Agencies_____	6
Special Assistance and Demonstrations_____	8
Technology Transfer_____	9

September 2006

The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202)720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202)720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

comparative evaluations, propagation and increase methods are determined and field tests are conducted. The material may then be released and made available to commercial growers. They in turn produce the seed or plants on a much larger scale and make it available to the public for conservation, reclamation, or restoration purposes. Currently, the Corvallis Plant Materials Center maintains and promotes 14 plant cultivars and pre-varietal releases. A 15th release, Skamania Germplasm Sitka alder (*Alnus viridis* spp. *sinuata*), was completed this summer and plants will be commercially available next year.

Pre-varietal Native Plants to Address Resource Needs

Commercial sources of native plants of “local” genetic origin are needed for wetland, upland, and riparian revegetation and other resource needs on an ecoregion or Major Land Resource Area (MLRA) basis. The PMC addresses this need by providing pre-varietal releases of species from specific areas for use in the same or similar area. Pre-varietal release is a process whereby a plant (individual, group, or whole population) from a specific location is identified and studied (by the PMC), increased (by the PMC or private grower), and certified (by the official seed certification agency in the state it was collected or grown). Pre-varietal releases may be “source identified”, “selected”, or “tested class”, depending on the degree of testing and evaluation they undergo.

Future Plant Releases: Oceanspray

Pre-varietal releases targeted for completion within several years include five ecotypes of oceanspray (*Holodiscus discolor*) which will be ecoregion specific. It is an important native shrub for riparian revegetation and wildlife habitat in western Oregon, western Washington, and northwestern California. The PMC is establishing isolated seed orchards for each selected population. Seed certification and harvest will begin in 2007.

Progress Continues on Common Garden Study of Roemers Fescue

Roemers fescue (*Festuca roemerii*) is a native fine leaf fescue found exclusively west of the Cascade Mountains in Washington and Oregon as well as northwestern California. It was once a dominant bunchgrass of oak savannas and prairies throughout the region. Because of extensive agriculture and urbanization, there remain only small, isolated remnant populations. For these reasons there is considerable interest in this species for ecosystem restoration as well as revegetation and erosion control.

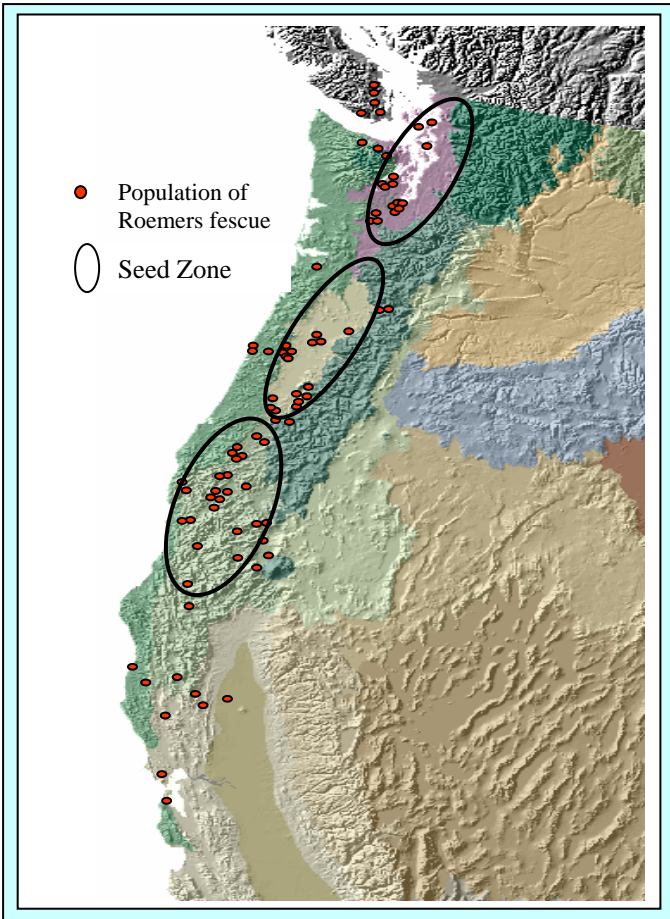
To address the need, a common garden study of Roemers fescue was initiated in 2001 in cooperation with Institute for Applied Ecology in Corvallis, and the Bureau of Land Management. By collecting seed from throughout its geographic range and growing out plants in a common garden, it is possible to identify patterns of genetic variation that correlate to the environment. The study contains 14 populations from Washington, 30 from Oregon, and 3 from California.



Specimens of Roemers fescue show high genetic diversity within and between populations

This year (2006) marked the completion of the common garden study and initiation of the seed increase phase of the project. Mortality in the garden was very high due to unusually wet winter conditions. Based on data from the study and what is known about the species

natural distribution, three seed zones have been delineated.



Data analysis helped to define clusters of populations as seed zones that corresponded with ecological regions of western OR, western WA, and northwestern CA [Puget Lowlands (top), Willamette Valley (center), and Siskiyou region (bottom).]

Each zone will be represented by a composite mixture of five to nine populations originally evaluated in the study. The three composites or groups of populations will become selected class releases for use in plant community restoration. A fourth highly productive population from the Coast has also been targeted for increase and use in general erosion control. This summer seed was re-collected in the wild from the populations chosen to represent each composite or seed zone. Seedlings are being raised and crossing blocks will be established this winter or spring.

PLANT TECHNOLOGY and INCREASES

The NRCS is a USDA agency with the responsibility of administering technically based conservation programs. Many of these

programs, such as CRP, CREP, GRP, WRP, and WHIP directly involve the use of plant materials and plant technology. The primary responsibility for developing new plants and technology lies with the PM program.

- Portions of the plant technology developed by the program are incorporated into the Field Office Technical Guide (FOTG) or supporting handbooks and become standards for conservation practices implemented on public and private lands.
- The National PM program maintains a web site, which contains useful information such as plant fact sheets and guides, publications developed by the PM program, sources of plant materials, and related websites. The website address is <http://plant-materials.nrcs.usda.gov>
- The PM program supports other NRCS computer applications such as the PLANTS database and VEGSPEC.

Technology studies at the Corvallis PMC to address priority resource needs involve:

- ✓ determining vegetative propagation, seed production, and establishment methods of plant materials (native forbs, shrubs, and grasses) for rehabilitating, stabilizing or restoring riparian areas, wetlands, and uplands, primarily at low elevations;
- ✓ studying and increasing plant materials for use in soil bioengineering;
- ✓ evaluating progress and monitoring maintenance needs of sites restored or revegetated through direct seeding, planting, and soil bioengineering;
- ✓ assessing flood inundation tolerance and other adaptive qualities of select grass, forb, and woody species;
- ✓ increasing and testing seed and plant materials for revegetation at low to high elevation areas in National Parks;
- ✓ increasing and determining seed propagation methods of native species for the Bureau of Land Management and Federal Highways; and

- ✓ installing demonstration plantings and providing materials to illustrate and promote the use of native species for windbreaks, landscaping, and wildlife.

Overall, about 30 new or ongoing studies and increases were conducted in 2005-2006. In terms of production, over 14,400 container plants, 500 cuttings, and an estimated 1019 pounds of seed were produced in 2005.

New Native Shrub Rooting Trial in 2006 for Streamside Planting and Soil Bioengineering

Native shrubs that root readily from hardwood (dormant) branches and cuttings continue to play a role in supplementing the use of willows for riparian restoration, streambank erosion control, and soil bioengineering practices such as live stakes, fascines (branch bundles) and brush layering. Native shrubs do not establish as readily as willows from dormant cuttings. Therefore, the PMC began a new study in January 2006 to look at the effect of wood fiber mulch, slow release fertilizer, and end sealing (application of wax to top end of cutting) on the survival and growth of seven native shrubs from unrooted cuttings (live stakes).

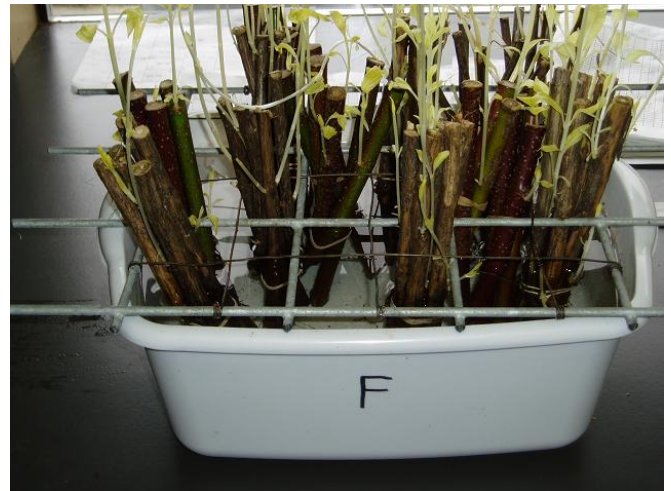
Preliminary results suggest that 1-2 inches of fiber mulch makes a substantial difference in the initial establishment and growth of black twinberry, redosier dogwood, mock orange, Pacific ninebark, Sitka willow, and common snowberry from cuttings. End sealing and slow release fertilizer have had minimal effects so far.



Significant improvement in establishment and growth of native shrubs from hardwood cuttings with mulch (inner rows) than without mulch (outer rows).

Pre-soaking Experiment with Dormant Cuttings of Willows and 3 Shrubs

In some situations, rooting and streamside establishment of willows may be improved by pre-soaking of dormant cuttings. The cuttings should be soaked in clean water just long enough to induce rooting without actual root or callus formation. Calluses are undifferentiated cells which may develop roots. An experiment was conducted to test the effect of water temperature on the rate of root initiation of six local willows and three native shrubs. Four different water temperature regimes were maintained. At 80°F most willows rooted in fewer than 7-10 days while at 68°F they rooted in less than 10-14 days. One species took 17 days. At both temperatures, callusing typically occurred 3-4 days before rooting. At 40-50°F root initiation took up to 45 days and 3 of 6 species still had not produced roots by the 59th day. Redosier dogwood never rooted at any temperature, while snowberry and black twinberry took 31 and 38 days respectively at 68°. At 80°, cuttings of these species may have perished from disease or rotted before ever rooting. No activity was observed at the coolest temperatures for the duration of the study (59 days). This study shows that pre-soaking willow cuttings, if undertaken, should be done for less than 7 days at warmer water temperatures. Further study is needed to pinpoint the number of days from 1 to 6.



Pre-soaking experiment. Willow and shrub cuttings were held in water baths at different temperatures for up to 59 days in order to initiate root development.

<i>pauciflora</i>	establishment
-------------------	---------------

Seed Production, Germination and Establishment Studies Benefit Commercial Growers

The major challenges facing the widespread increase and availability of native grasses and forbs are unknown seed production techniques and inherent low seed yields for many species. To address this bottleneck, the Center conducts studies and evaluates seed production and establishment methods. Topics include fertilization, post harvest residue management, seeding and harvest methods, seed dormancy and germination, and control of annual grasses and broadleaf weeds. Besides 10 to 15 forbs, 20 grasses are currently being increased or tested at the PMC:

NATIVE GRASSES UNDER INCREASE AND STUDY

Common name	Scientific name	Technology Issues
Lemmon's needlegrass	<i>Achnatherum lemmonii</i>	Seed yields, harvesting, indeterminate flowering
Hall's bentgrass	<i>Agrostis hallii</i>	Establishment, harvest technology, seed yields
California brome	<i>Bromus carinatus</i>	Volunteer seedlings, production, control
Columbia brome	<i>Bromus vulgaris</i>	Establishment, longevity
Bluejoint	<i>Calamagrostis canadensis</i>	Seed fill, establishment from seed, stand mgt.
California oatgrass	<i>Danthonia californica</i>	Establishment, seed dormancy, adaptation
Tufted hairgrass	<i>Deschampsia caespitosa</i>	Adaptation (inundation, salinity) ecotypic variation
Annual hairgrass	<i>Deschampsia danthonioides</i>	Soil moisture mgt., weed management
Slender hairgrass	<i>Deschampsia elongata</i>	Soil moisture management, longevity
Blue wildrye	<i>Elymus glaucus</i>	Seed shattering
Slender wheatgrass	<i>Elymus trachycaulus</i>	Stand longevity, management
California fescue	<i>Festuca californica</i>	Establishment, seed germination/dormancy
Roemers fescue	<i>Festuca roemerii</i>	Seed fill, longevity, low yields, rust
Red fescue	<i>Festuca rubra</i>	Seed yields
Tall mannagrass	<i>Glyceria elata</i> (<i>G. striata</i>)	Soil moisture mgt, seed dormancy, establishment
Meadow barley	<i>Hordeum brachyantherum</i>	Seed retention, harvest techniques
Rice cutgrass	<i>Leersia oryzoides</i>	Harvest techniques, stand rejuvenation, seed dormancy, establishment
Harford's melic	<i>Melica harfordii</i>	Seed fill, variable seed dormancy, stand mgt., harvesting methods
Pine bluegrass	<i>Poa secunda</i> (<i>P. scabrella</i>)	Stand longevity, harvesting, row spacing
Weak alkaligrass	<i>Torreyochloa pallida</i> var.	Stand longevity, soil moisture management,

Furthermore, significant amounts of time and funds have been put into obtaining and evaluating seed harvesting, cleaning and conditioning equipment. A new mini-combine, windrower, and a three screen fanning mill were added in 2004. The goal is to define and perfect production and processing methods for PMC releases and other species in order to maximize seed quality and ease of planting.

Weed Control in Broadleaf Lupine Grown for Seed

A new study underway in 2006-07 is the evaluation of various pre and post-emergent herbicides on weed control for establishment and seed production of broadleaf lupine (*Lupinus latifolius*). The work is cooperative with the Oregon State University Crop and Soil Science Department. The PMC established the plots and OSU researchers applied 12 chemical treatments and recorded results. The goal is to expand these efforts to include other native forbs and grasses with the hope of eventually obtaining "special local needs labels" for herbicides useful in native seed production. Results will be reported in 2007.



Lupine herbicide trial. Plots demonstrate extreme results: good weed control and little damage (left), weed control but 100% lupine mortality (center), and control with no herbicide (right).

Adaptation: Flood (Inundation) Tolerance of Wetland Plants

Evaluating the water depth and the length of season of flooding that native grasses, forbs, and shrubs can tolerate helps determine where these species perform best in the landscape. The results become part of the planting or

seeding prescriptions for wetland enhancement and riparian area rehabilitation work. The PMC has conducted several related trials since 1998 in water tanks and sloped ponds that create a water depth gradient.



Sloping pond planted to 10 native wetland grasses on May 22 to test adaptation to variable soil moisture and water depth.

In 2006, the fourth study in a series of experiments was undertaken to evaluate native grasses and other plants for their ability to survive and grow under a gradient of hydrologic conditions varying from moist soil to 8 inches of water depth. Plugs of 10 native wetland grasses, two sedges, and one forb were planted into two ponds on May 22. Once the plants are established, water levels will be maintained at constant level beginning in the fall and throughout the summer of 2007.

PARTNERSHIPS WITH OTHER AGENCIES

Upland Plants and Technology for the National Park Service

Since 1988 the Corvallis Plant Materials Center has developed and implemented numerous cooperative agreements with Olympic National Park, Mount Rainier National Park, and Crater Lake National Park of the National Park Service. These collaborative projects were created to share technical expertise, develop propagation or establishment technology, and produce indigenous plant materials for use in park revegetation programs.

Over the past 15 years, the Corvallis PMC has collected, increased, and tested more than 65

native species, grown hundreds of pounds of native grass and forb seed, produced tens of thousands of containerized plants, and investigated revegetation techniques onsite (Crater Lake and Mount Rainier in the 1990s). High standards of seed quality and genetic integrity are maintained by isolating fields for each species and ecotype. Information on collection, field establishment and management, seed increase and processing for grasses and forbs, propagation and container production of herbaceous and woody species, and results of tests or trials are compiled and published in annual reports and presented at meetings. These species are continuously added as protocols to the Native Plant Network website:

(www.nativeplantnetwork.org).



Summer employee, Henri Compaore, collecting seed on Hurricane Ridge, Olympic National Park, August 7, 2006.

Current projects include two roadside revegetation projects (SR 123 in Mount Rainier National Park and Hurricane Ridge Road in Olympic National Park). Over 400 lbs of seed were produced in 2006 for these projects, and 130 lbs of seed was delivered in 2006 to Mount Rainier. Six grass species and three forbs are being grown for seed production at the PMC. These projects will continue through 2007.

Other than roadside projects, the PMC is also involved in revegetation of shorelines and exposed lakebed slopes in Olympic National Park. Two dams on the Elwah River are scheduled to be removed in 2009 in order to restore salmon habitat. This will leave 500

acres of land in need of revegetation under what is now Lake Mills and Lake Aldwell. The Center has agreed to produce plants and seed of 15 trees and shrubs, 11 forbs, six grasses, and four sedges and rushes. Total amount of seed needed for the project is estimated at 4000 lbs! In 2006, the PMC maintained seed increase fields of six grasses, seven forbs, three sedges, and three rushes. These fields total over four acres in size and produced approximately 300 lbs of seed.



Oregon sunshine (*Eriophyllum lanatum*) seed increase field at the Corvallis PMC, June 12, 2006. (Origin: Hurricane Ridge)

Wetland and Wet Prairie Species for the Bureau of Land Management

In 2002, The Corvallis Plant Materials Center (PMC) entered into a new agreement with the Eugene District of the Bureau of Land Management (BLM) to perform seed germination trials and conduct small scale increases of native wetland and wet prairie species. Many of these species have proven difficult to establish in restored wetlands or have very high labor costs associated with collection (as high as \$2000 an ounce!). The PMC agreed to investigate and document propagation techniques from seed for these species and to evaluate their potential for agronomic seed increase. The agreement has been renewed every year since 2002 and since its inception, the Center has successfully produced over 30 lbs of 60 species, most of which have little if any published data on germination or production. New harvesting techniques, such as planting annuals in fields

covered with weed fabric have been developed for small scale seed increase.



Baby blue-eyes seed increase field. Seeds shatter onto weed fabric and are harvested by vacuuming or sweeping the surface.

These new techniques have increased yields while reducing collection time for difficult-to-collect species such as three-petal bedstraw (*Galium trifidum*) and baby blue eyes (*Nemophila menziesii*).

Native Grasses and Legumes for Fire Rehabilitation in Southern Oregon

Medford and Roseburg Oregon, BLM Districts are regularly in need of native seed for fire rehabilitation projects. The PMC agreed to work with certain native grasses and forbs that are seldom grown by large-scale seed producers. Approximately 200 lbs of seed were harvested in 2005. In 2006, three acres of grasses and three small plots of legumes were in production. The 2006 contract also included further germination research and containerized production of species listed as BLM Special Status [Umpqua green gentian (*Frasera umpquaensis*), tall bugbane (*Cimicifuga elata*)], and seed increase of Elmer's fescue (*Festuca elmerii*). Over 2500 plants were produced in 2006 that will be delivered for transplanting this fall. Both BLM contracts are renewed on a yearly basis.

SPECIAL ASSISTANCE AND DEMONSTRATIONS

Blue violet Propagation for Oregon Silverspot Butterfly Recovery

The PMC has the opportunity to assist with the recovery of Oregon Silverspot Butterfly (*Speyeria zerene hippolyta*). The silverspot was declared a federally threatened species in 1980 and is classified as endangered in Oregon and Washington. It occurs in small, isolated populations on grassland habitats within its range from coastal Washington south to coastal northern California.



Oregon silverspot butterfly nectaring on Canada goldenrod at Cascade Head on the central Oregon coast.

The adult butterflies feed on flower nectar of yarrow (*Achillea millefolium*), pearly everlasting (*Anaphalis margaritacea*), Canada goldenrod (*Solidago canadensis*), and Douglas aster (*Aster subspicatus*). These herbs are part of the coastal meadow plant community which the butterfly inhabits. The larvae of the silverspot butterfly prefer to feed on the leaves of the early blue violet (*Viola adunca*). The female lays her eggs in close proximity to this larval food source.

Habitat conversion, elimination of fire, and the introduction and increase of weedy invasive species have all contributed to a decline of the violets and subsequently, rearing habitat for

the larvae. Therefore, in 2005 the PMC and Anne Walker of the U.S. Fish and Wildlife Service began a collaborative effort to develop a long-term seed source for habitat restoration. Working with the U. S. Forest Service, Oregon Departments of Transportation and Oregon Parks, Anne has identified a number of sites suitable for reintroduction. Violet seed production at the PMC began in 2005 resulting in 2 lbs of seed. This year, Nick Testa of the Oregon Department of Transportation and Anne collected wild seed of the nectar source species as well as native dwarf red fescue. The fescue is also an important species for the butterfly habitat. The seed of these species will be used to establish seed increase plots. In addition, 4500 violet plants were produced in 2006 which will be fall planted on a restoration site on the central Oregon coast. As seed becomes available, research will begin on how to best restore butterfly habitat.

Willamette Valley Seed Increase Program

In 2005, NRCS entered into a cooperative agreement with the Institute for Applied Ecology (IAE). IEA goals are to develop an ecologically appropriate supply of native seed for restoration of Willamette Valley wetland and upland prairie ecosystems. Over the last two years they have developed a focus list of species that will be targeted for seed increase, identified and mapped quality collection sites throughout the Willamette Valley, and collected



wild seed from as many populations as possible to capture genetic diversity. The PMC began common garden studies of five high priority forbs this spring. The data from the projects will be used to

develop genetically appropriate releases of big leaf lupine (*Lupinus polyphyllus*), slender cinquefoil (*Potentilla gracilis*), common self-heal (*Prunella vulgaris* ssp. *Lanceolata*), Oregon saxifrage (*Saxifraga oregana*), and narrow-leaf mules ears (*Wyethia angustifolia*) to be used on WRP sites.

Native Grass and Threatened and Endangered Species Gardens

In 2002 the PMC established a native grass demonstration garden. The garden includes between 26 and 32 species of native upland prairie, woodland, wet prairie, and marsh-bog grasses, organized by habitat type. It is used for training NRCS field office, Soil and Water Conservation District, and other personnel on native grass identification and use. The staff also designed and installed an endangered species garden in 2003 for similar purposes. The Berry Botanic Garden donated seeds of seven endangered species of the Corvallis PMC service area: Willamette valley daisy (*Erigeron decumbens* var. *decumbens*), Bradshaw's lomatium (*Lomatium bradshawii*), Nelson's checkermallow (*Sidalcea nelsoniana*), Kincaid's lupine (*Lupinus sulphureus* spp. *kincaidii*), peacock larkspur (*Delphinium pavonaceum*), shaggy horkelia (*Horkelia congesta*), and Curtus's aster (*Aster curtus*).

TECHNOLOGY TRANSFER

The PMC regularly produces publications and makes technical and popular presentations in order to disseminate technology to NRCS, SWCD, and other partners, as well as the general public. Twelve presentations were given in 2005 on various PMC activities and technology development topics. Customers were directly assisted 111 times. Papers include technical reports, technical notes, brochures, plant guides, and fact sheets summarizing work and plant releases. Major publications in 2005 were:

- 11 "Plant Fact Sheets" on native wetland grasses
- "Variety Acceptance Request for Skamania Germplasm Sitka Alder" (37 page tech. report).
- "Propagation and Seed Increase of Fussy Prairie Plant Species" (poster and conference paper)

- "Notice of Release of Skamania Germplasm Sitka Alder"
- "Identification, Ecology, Use and Culture of Sitka alder" (Technical Note)
- "The 2004 Olympic National Park Elwha River Ecosystem and Fisheries Restoration Annual Report"
- "The 2004 Olympic National Park Hurricane Ridge Road Restoration Annual Report"
- "Progress Report of Activities, Corvallis Plant Materials Center 2004-2005".
- "The 2004 Mount Rainier National Park SR123 Restoration Annual Report"
- "The 2004 Medford District Bureau of Land Management Annual Report"
- "The 2004 Crater Lake National Park Annual Report: Highway 62 Revegetation Project.
- "The 2004 Bureau of Land Management Annual Report: West Eugene Wetlands"

Threatened and Endangered Species Training

NRCS (and all Federal) funds that are used on projects are supposed to be in compliance with the Federal Endangered Species Act (ESA). For example, any use of federal dollars should result in no impacts to any federally-listed species or if impacts are identified, then the US Fish and Wildlife Service should be consulted prior to project implementation.



Willamette Daisy is both a state and federally listed endangered species.

In the case of plants, a field survey at the appropriate timing (when the plant is blooming) can determine whether federally-listed plants are present (and thus an issue) within a

project. Many field staff had indicated that they would like to have training on the identification of these Threatened or Endangered plants. To meet this need, five training sessions for four different plant species were provided during the spring and summer of 2006. Species included in these trainings were: Bradshaw's lomatium (*Lomatium bradshawii*), Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*), Willamette daisy (*Erigeron decumbens* var. *decumbens*) and Nelson's checkermallow (*Sidalcea nelsoniana*). Trainings for additional species are planned for the spring and summer of 2007.

PMC Hosts Both a Field Day and the Plant Materials Portion of Boot Camp Training

The PMC conducted a successful Field Day on June 6th, 2006. Attended by at least 25 NRCS and Soil and Water Conservation District Employees, topics included a review of the Corvallis PMC testing and plant increase work, transplanting techniques, weed and native grass identification, soil bioengineering techniques for lives stakes and fascines, and considerations for seeding native grasses and forbs. A field tour of the farm also took place.



Participants in June 2006 PMC Field Day learn about seed production of native forbs from Amy Bartow.

In July 2006 the PMC also provided training to 30 new NRCS employees during their six week "Boot Camp" held in Corvallis, Oregon. PMC staff started the session with an introduction and overview of studies and projects at the PMC. Participants were then taken out to the field and broken into three training exercises consisting of individual stations that covered such topics as: 1) field planting evaluations 2) seed drill calibration and farm machinery safety and 3) planting methods and considerations for containerized/bare root/hardwood cutting stock. The students rotated between the three stations and spent the afternoon learning thru hands-on experience. A tour of the seed cleaning facilities ended the day.

Prepared by Dale Darris, Conservation Agronomist, Amy Bartow, Botanist and Production Manager, Kathy Pendergrass, Plant Materials Specialist, and Joe Williams, Manager, Corvallis PMC. All Photos by PMC staff unless otherwise indicated.