

CORVALLIS PLANT MATERIALS CENTER
NATURAL RESOURCES CONSERVATION SERVICE
CORVALLIS, OREGON
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THE 2007 MOUNT RAINIER NATIONAL PARK ANNUAL REPORT:
State Road 123 Revegetation Project



Figure 1. Mount Rainier from SR123, Mount Rainier National Park, August 12, 2007.

I. Brief Background of Project

The Corvallis Plant Materials Center (PMC) entered into a new agreement with Mount Rainier National Park in 2004 to provide native plant materials for the ecological restoration of the State Road 123 construction area. It was agreed that the PMC would produce a minimum of 25 lbs (PLS) of *Elymus glaucus*, 50 lbs (PLS) of *Bromus carinatus*, and 25 lbs (PLS) of *Festuca rubra*. A final seed delivery was scheduled for the fall of 2007 when the project was completed. These fields may be continued to produce seeds for use in restoring flood-damaged areas.

Activities in 2007 included maintenance, harvest and seed cleaning of three grass seed increase fields.

II. Accessions Involved

Accessions included for State Road 123 are listed in Table 1. This table also displays activities performed by PMC staff in 2007.

Table 1. Accessions involved for State Road 123 Revegetation Project with Corvallis Plant Materials Center in 2007.

Scientific Name	Common Name	Symbol	Accession #	2007 Activity ¹
<i>Bromus carinatus</i>	California brome	BRCA5	9079309	sfp
<i>Elymus glaucus</i>	blue wildrye	ELGL	9079310	sfp, dlv
<i>Festuca rubra</i>	red fescue	FERU	9079348	sfp

1- sfp= seed field production, dlv= delivery.

III. Experimental Propagation

There was no experimental propagation in 2007.

IV. Seed Increase

The older sections of the *Bromus carinatus*, *Festuca rubra*, and *Elymus glaucus* fields looked fair after winter. The PMC experienced many hard frosts in March. The fields were still slightly dormant and didn't seem affected by the freezing temperatures. The new sections of the *B. carinatus* and *F. rubra* fields were growing quite slowly during the spring, but once the temperatures reached 65° (F) the plants grew vigorously. The new *F. rubra* section did not flower in 2007, although the *B. carinatus* flowered and produced a good amount of seed. The *E. glaucus* field looked vigorous, but when it flowered the stand seemed thin. After it was swathed, the PMC received a two inches of summer rain. This caused a lot of seed to shatter on the ground before it was dry enough to be combined. This field is very old (for a blue wildrye field) and it is not surprising to see the drop in production, which was worsened by the summer rains that interfered with harvesting.

Table 2. Seed Harvested for State Road 123 Revegetation Project at Corvallis Plant Materials Center in 2007.

Species	Area Harvested	Date(s)	Method	Yield	Comments
<i>Bromus carinatus</i>	0.18 acres	July 2	"Moon rover"	55 lbs	Good stand, high vigor
<i>Festuca rubra</i>	0.12 acres	June 27	Seed stripper	53 lbs	Excellent stand, high vigor
<i>Elymus glaucus</i>	0.58 acres	July 6/ July 23	Swath/ combine	38 lbs	Excellent stand, medium vigor

2007 Field Seed Production Notes:

All three fields (only the portions that were over 1 year old) were fertilized in October 2006 with 25 lbs/ac nitrogen (N), and in February 2007 with 50 lbs/ac N plus 15 lbs/ac sulfur (S). Weed control within the plots was mainly performed by hand-hoeing and rousing, and broadleaf herbicides. Field borders were cultivated periodically throughout the year. After harvest, fields were burned using drip torches. In mid October of 2006, a new pre-emergent herbicide, Outlook®, was applied to all fields that had been harvested in 2006. The herbicide didn't seem to cause any injury to the established plants and fields were very clean. The PMC will continue to use this herbicide as a weed control method on second year fields. It may not be necessary to use it every year on the fields. More research on timing of applications will be performed on other grass seed increase fields at the PMC.



Figure 2. Burning an *Elymus glaucus* seed increase field at the Corvallis Plant Materials Center. Burning removes thatch, stimulates new growth, and reduces pests and diseases.

V. Delivery of Plant Materials

Only 50 lbs of *E. glaucus* was requested for delivery in the fall of 2007. It was mailed to the park and the remaining seed will be stored at the PMC until requested.

Table 4. Seed delivered on September 20, 2007 to Mount Rainier National Park.

Species	Bulk amount delivered	Germination %	Purity %	PLS amount delivered	(PLS)Amount remaining
<i>Bromus carinatus</i>	0	91	99.75	0	50 lbs of 2007 seed
<i>Festuca rubra</i>	0	86	98.40	0	45 lbs of 2007 seed
<i>Elymus glaucus</i>	72 lbs	95	99.30	67.92 lbs	36 lbs of 2007 seed 181 lbs of 2006 seed 76 lbs of 2005 seed