

CORVALLIS PLANT MATERIALS CENTER
NATURAL RESOURCES CONSERVATION SERVICE
CORVALLIS, OREGON
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THE 2005 MOUNT RAINIER NATIONAL PARK ANNUAL REPORT:
State Road 123 Revegetation Project

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*.

Activities in 2005 included cleaning of native seed collected by NPS staff, establishment, maintenance, harvest and seed cleaning of three grass seed increase fields.



Figure 1. Swathing blue wildrye on July 7, 2005 at the Corvallis Plant Material Center.

II. Accessions Involved

Accessions included for State Road 123 are listed in Table 1. This table also displays activities performed by PMC staff in 2005.

Table 1. Accessions involved for State Road 123 cooperative agreement with Corvallis Plant Materials Center in 2005.

Scientific Name	Common Name	Symbol	Accession #	2005 Activity ¹
<i>Bromus carinatus</i>	California brome	BRCA5	9079309	Sfp
<i>Elymus glaucus</i>	blue wildrye	ELGL	9079310	Sfp
<i>Festuca rubra</i>	Red fescue	FERU	9079308	Sfp

1- sfp= seed field production.

III. Experimental Propagation

There was no experimental propagation in 2005.

IV. Field Seed Increase

Park staff provided the PMC with seed for fall planting. On October 21, 2005 fields of FERU and BRCA5 were expanded using a six-row Planetet-jr seeder with a carbon-banding unit. Fields were sprayed with Diuron after planting. Seedlings emerged within 2-3 weeks. Soon after planting, many days of hard rain pelted the seedlings, but did not seem to cause any significant damage. Fields were sprayed with Banvel in late November to control broadleaf weeds.

Table 2. Seed Increase Field Establishment October, 2005.

Species/ Ac	Seeding Rate	Method	Weed Control
BRCA .05 acre 12 150' rows	10 (bulk)lbs/acre	Seeded with six-row Planet Jr. seeder	none
FERU .08 acres 24 150' rows	4 (bulk)lbs/acre	Seeded with six-row Planet Jr. equipped with a carbon-banding unit	Diuron application following carbon banding

2005 Field Seed Production Notes:

All three fields were fertilized in October 2004 with 25 lbs/ac nitrogen (N), and in February with 50 lbs/ac N plus 15 lbs/ac sulfur (S). Weed control within the plots was mainly performed by hand-hoeing and rouging. Glyphosate was used on the field borders. Grass fields were mowed using a Brady flail chopper to remove residue.

Table 3. Seed Harvested for State Road 123 Revegetation Project at Corvallis Plant Materials Center in 2005.

Species	Area Harvested	Date(s)	Method	Yield	Comments
BRCA5	.045 acre	June 25	Hand	35lbs	Good stand, high vigor
FERU	.04	July 20	Swath/combine	934g	Excellent stand, high vigor
ELGL	.58 acre	July 12	Swath/combine	221lbs	Excellent stand, high vigor

After harvest, FERU field was burned using drip torches. Three one-meter plots were sprayed with water prior to burning to act as control plots. These plots remained unburned as the fire passed, and will be evaluated for seed yields in 2006.



Figure 1. Sprayed “control” plot before burning (left). Burning of FERU field (right).

V. Delivery of Plant Materials.

A portion of the seed produced was requested for delivery on September 10, 2005. It was mailed to the park and the remaining seed will be stored at the PMC until requested. The FERU produced at the PMC in 2005 was contaminated with many weeds that could not be removed. Park staff collected 100g of wild FERU seed in 2005, it was combined with the field produced FERU and used to expand the existing field.

Table 4. Seed Delivered on September 10, 2005 to Mount Rainier National Park.

Species	Bulk Amt delivered	% Germination	% Purity	PLS amt delivered	Amount Remaining
BRCA5	55lbs	88	98.71	47.8lbs	0
ELGL	68lbs	95	99.3	64.1lbs	144lbs