Protocol Information

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United States Department of Agriculture
Natural Resources Conservation Service

Corvallis
Plant Materials Center
Corvallis, Oregon

Family Scientific Name:	**Polygonaceae**
Family Common Name:	**Knotweed**
Scientific Name:	***Eriogonum marifolium* Torr. & Gray**
Common Name:	**wild buckwheat; marumleaf buckwheat**
Species Code:	**ERMA4**
Ecotype:	**Crater Lake National Park, open dry meadows, 6,500 to 7,000 ft elevation.**
General Distribution:	**Washington, Oregon, California, Nevada; gravelly flats in lodgepole and ponderosa forest to alpine talus and ridges up to 9,000 ft elevation.**
Propagation Goal:	**Plants**
Propagation Method:	**Seed**
Product Type:	**Container (plug)**
Stock Type:	**10**
Time To Grow:	**5 Months**
Target Specifications:	**Well-branched fibrous roots should fill the "cone-tainer"; sturdy, well-branched crown growth.**
Propagule Collection:	**Seed easily collected and fairly abundant in most years; hand-collected into paper sacks by pinching off the dry seed heads.**
Propagule Processing:	**Relatively large seed is easily screened by hand or office clipper (air screen machine) to remove chaff with 1/16th screen, medium-low air flow.**
Pre-Planting Treatments:	**16 weeks of cold-moist stratification in a walk-in cooler.**
Growing Area Preparation/	**Seeds were sown into standard 10 inch "cone-**

Annual Practices for Perennial Crops:	**tainers" filled with Fisons' Sunshine #3 seedling starter; surface-sown seed covered with a fine layer of vermiculite; watered in and then covered with polyethylene sheeting and placed in a walk-in cooler at about 36°F for 16 weeks. We used 47 grams of seed for 1800 cones; these later had to be thinned and we would recommend about half that amount of seed in future seedings.**
Establishment Phase:	**Cones with stratified seed were moved to a warm sunny greenhouse at 70°F + degrees day / 55°F night in April and watered lightly with mist nozzle until established.**
Length of Establishment Phase:	**Robust seedlings emerged fairly quickly; germination was complete within a month.**
Active Growth Phase:	**Plants watered early in the morning to minimize dampness overnight; fertilized lightly every other week with half-strength Peters' Triple-20 NPK.**
Length of Active Growth Phase:	**May to July**
Hardening Phase:	**Cones moved outdoors in June; fertilization discontinued in July; watering intervals gradually lengthened as roots developed.**
Length of Hardening Phase:	**4 weeks**
Harvesting, Storage and Shipping:	**Plants were shipped in August of the same year by refrigerated van to Crater Lake for outplanting in September.**
Length of Storage:	**unknown**
Outplanting performance on typical sites:	**Roots could be pruned in areas where soil depth is a problem; crowns must be carefully placed at soil level.**
Other Comments:	**Shorter "stubby" cones could probably be used to produce these seedlings also and would make planting easier in shallow soil areas.** **The use of manufacturer and trade names in this document is for clarification only. No discrimination is intended and no endorsement is given by the USDA NRCS.**
References:	**Corvallis Plant Materials Center Technical Report: Plants for Woodland and Rangeland Reclamation and Erosion Control 1980 - 1997 (includes Annual Reports to Mount Rainier National Park from 1990 – 1996).**

Hitchcock, C.L. and A. Cronquist 1973 Flora of the Pacific Northwest. University of Washington Press, Seattle, WA.

Kruckeberg, Arthur R. 1982. Gardening With Native Plants of the Pacific Northwest: An Illustrated Guide. Seattle: University of Washington Press.

USDA, NRCS. 2001. The PLANTS Database, Version 3.1 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Citation:

Trindle, Joan DC; Flessner, Theresa R. 2003. Propagation protocol for production of container *Eriogonum marifolium* Torr. & Gray plants (10); USDA NRCS - Corvallis Plant Materials Center, Corvallis, Oregon. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 5 January 2010). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.