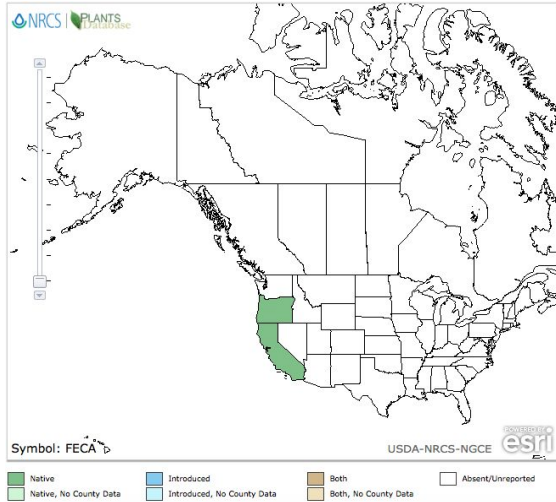
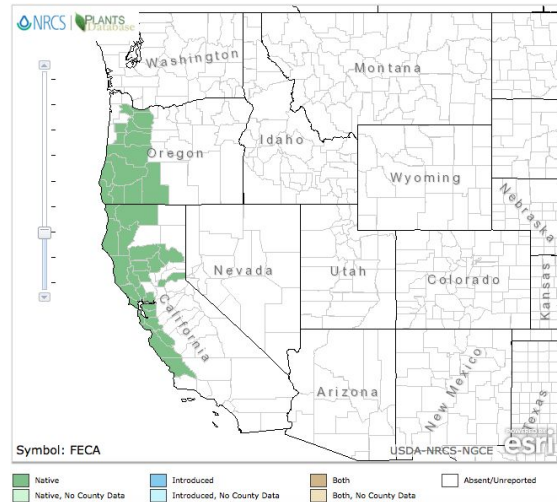


Plant Propagation Protocol for *Festuca Californica*
ESRM 412 – Native Plant Production
Spring 2016

North American Distribution



Washington State Distribution



Source: USDA PLANTS Database

TAXONOMY	
Family Names	
Family Scientific Name:	Poaceae
Family Common Name:	Grass
Scientific Names	
Genus:	Festuca
Species:	F californica
Species Authority:	Vasey
Variety:	
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	

Common Synonym(s) (include full scientific names (e.g., <i>Elymus glaucus</i> Buckley), including variety or subspecies information)	<i>Festuca hitchcockianus</i>
Common Name(s):	California Fescue
Species Code (as per USDA Plants database):	FECA
GENERAL INFORMATION	
Geographical range	OR and CA - see top of protocol
Ecological distribution	Coast ranges, foothills and valleys from Clackamas County, OR to San Luis Obispo County, CA.
Climate and elevation range	Sea level-6500 ft in the mountains
Local Habitat and abundance	Tolerates sun to intermediate shade however it is most frequent in dappled shade, along borders of woods, and on north facing slopes.
Plant strategy type/ successional stage	Plant in tightly clumped with tall and erect stems.
Plant characteristics	Grows to a height of 60-140 cm.
PROPAGATION DETAILS	
Propagation Goal (Options: Plants, Cuttings, Seeds, Bulbs, Somatic Embryos, and/or Other Propagules):	Seeds
Propagation Method (Options: Seed or Vegetative):	Seed
Product Type (options: Container (plug), Bareroot (field grown), Plug + (container-field grown hybrids, and/or Propagules (seeds, cuttings, poles, etc.))	Propagules
Stock Type:	
Time to Grow (from seeding until plants are ready to be outplanted):	0 weeks

Target Specifications (size or characteristics of target plants to be produced):	N/A. Direct sown to site
Propagule Collection Instructions (how, when, etc):	Often small lots. Hand collection with paper bags is a common method in spring through summer
Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc):	There are approximately 224,000 (+/- 20%) seeds per pound with hulls intact. Each 1 pound of seed sown per acre is equivalent to approximately 5 seeds per square foot.
Pre-Planting Propagule Treatments (cleaning, storage, dormancy treatments, etc):	<p>Cleaning: Seed lot is first processed using a Westrup Model LA-H laboratory brush machine, with a #40 mantel, at a speed of 3, to remove seed from stems and de-awn. Seeds are then finished by air-screening, to remove chaff and inert material, using an office Clipper, with a top screen: 1/18 x 1/4 to 1/2 slot and a bottom screen: 1/16 to 1/25 round, medium speed, and low to medium air</p> <p>Storage: freezer storage is adequate</p> <p>Seed dormancy is not observed commonly with this species but some suggest that a two week cold-moist stratification may raise germination rates.</p>
Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc):	
Establishment Phase Details (from seeding to germination):	Spring sowing can result in staggered germination, therefore fall planting is preferred due to cooler temperatures.
Length of Establishment Phase:	2-8 weeks
Active Growth Phase (from germination until plants are no longer actively growing):	Unknown
Length of Active Growth Phase:	Unknown

Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of cold-hardiness and preparation for winter):	Unknown
Length of Hardening Phase:	Unknown
Harvesting, Storage and Shipping (of seedlings):	N/A. Direct sown to site
Length of Storage (of seedlings, between nursery and outplanting):	N/A. Direct sown to site
Length of Storage (of seedlings, between nursery and outplanting):	N/A. Direct sown to site
Other Comments (including collection restrictions or guidelines, if available):	
INFORMATION SOURCES	
References (full citations):	<p>Barner, Jim. 2009. Propagation protocol for production of Propagules (seeds, cuttings, poles, etc.) <i>Festuca californica</i> Vasey seeds USDA FS - R6 Bend Seed Extractory Bend, Oregon</p> <p>Lady Bird Lohmson Wildflower Center, http://www.wildflower.org/plants/result.php?id_plant=FECA</p> <p>The Grass Manual on the Web, http://herbarium.usu.edu/webmanual/info2.asp?name=Festuca_californica+&type=treatment</p> <p>USDA Forest Service Fire Effects Information System (FECA), http://www.fs.fed.us/database/feis/plants/graminoid/fescal/all.html</p> <p>Jepson Interchange, http://ucjeps.berkeley.edu/cgi-bin/get_cpn.pl?FECA</p> <p>Integrated Taxonomic Information</p>

	System, http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=40811 USDA, NRCS, PLANTS Database, plants.usda.gov
Other Sources Consulted (but that contained no pertinent information) (full citations):	
Protocol Author (First and last name):	Hardy Wooldridge
Date Protocol Created or Updated (MM/DD/YY):	May 25, 2016