

Plant Propagation Protocol for *Lupinus littoralis*

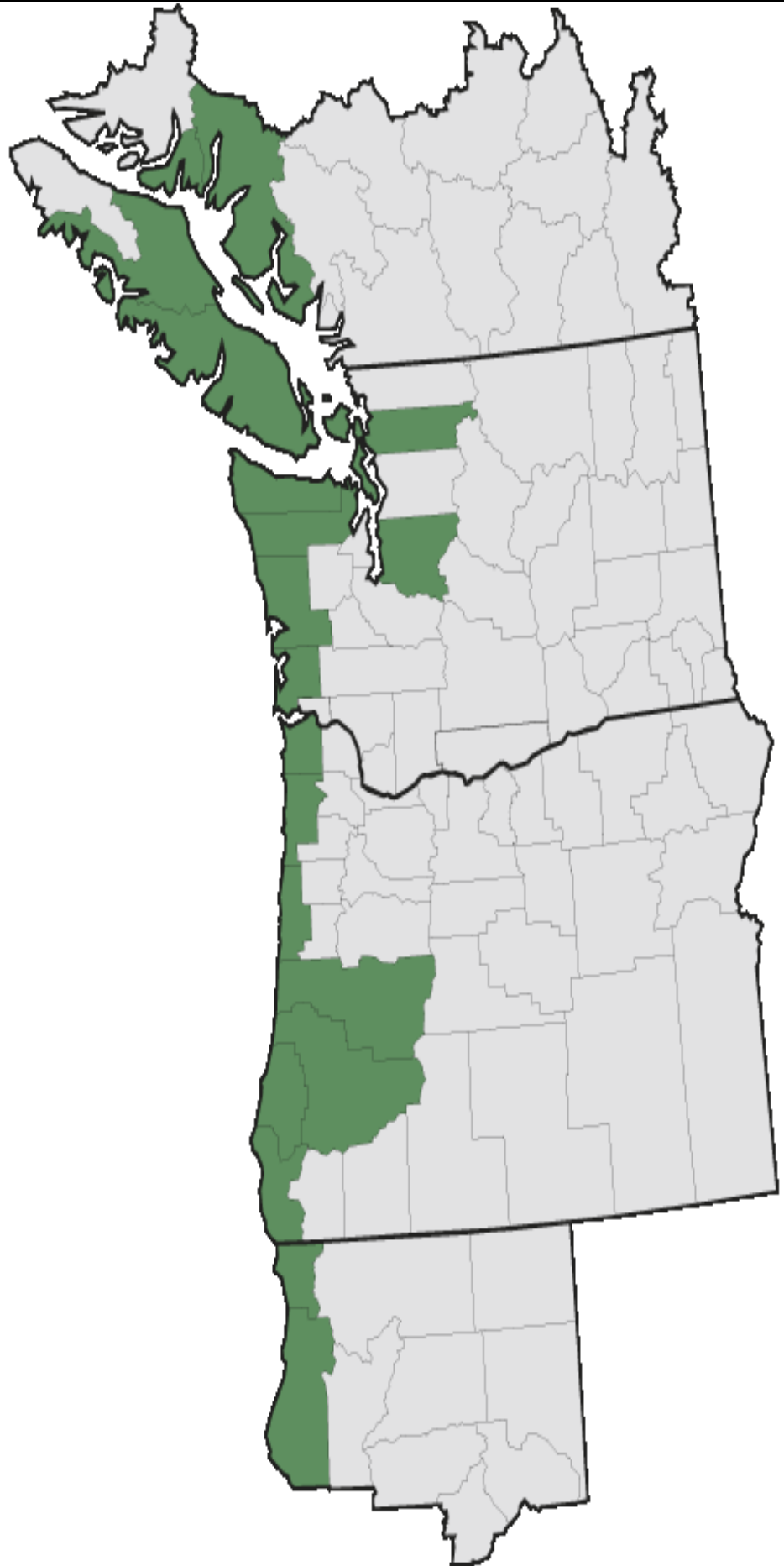
ESRM 412 – Native Plant Production

Protocol URL: [https://courses.washington.edu/esrm412/protocols/\[LULI2.pdf\]](https://courses.washington.edu/esrm412/protocols/[LULI2.pdf])



TAXONOMY	
Plant Family	
Scientific Name	Fabaceae ¹
Common Name	Pea family ¹
Species Scientific Name	
Scientific Name	<i>Lupinus littoralis</i> Douglas ¹
Varieties	n/a
Sub-species	n/a
Cultivar	
Common Synonym(s)	n/a
Common Name(s)	Seashore Lupine ¹
Species Code (as per USDA Plants database)	LULI2 ¹
GENERAL INFORMATION	

Geographical range ²



Ecological distribution	Found in areas with strong maritime influence. Found on the immediate coast from British Columbia to Southern Oregon ²
Climate and elevation range	Usually will not be found above 500 ft. elevation. Will grow in typical seashore climate such as high wind and rain. Resides along beaches and costal dunes. ³
Local habitat and abundance	Found infrequently along the coast. Can be found along the Puget Sound as well. <i>L. littoralis</i> will not be found along rivers or lakes. Can be found alongside <i>Carex macrocephala</i> , <i>Poa macrantha</i> , <i>Glehnia leicarpa</i> , and <i>Polygonum paronychia</i> . ³
Plant strategy type / successional stage	Early seral colonizer of beaches and dunes. It can tolerate the harsh, windy environment typical of this environment. ²
Plant characteristics	Perennial plant, silver with long shaggy hairs, especially at nodes. Leaves many, along stems on 1–3 in. petioles, divided palmately to 5–9 leaflets, each 1/3–1 1/2 in. long. Flower spike 5–6 in. long, on 1–3 in. stalk ²
PROPAGATION DETAILS	
Ecotype	n/a
Propagation Goal	Plants and seeds ⁴
Propagation Method	Seed
Product Type	Container (plug) ⁴
Stock Type	n/a
Time to Grow	6-8 weeks ²
Target Specifications	n/a
Propagule Collection Instructions	Collect seeds from July to August, as pods are mature. However, the pods will shatter if collection occurs too late. Seeds can be collected following national guidelines or purchased on-line. ⁴
Propagule Processing/Propagule Characteristics	Each <i>L. littoralis</i> pod contains about 12 seeds, which are viable for long periods, ranging from 2-15 years ²
Pre-Planting Propagule Treatments	Seeds have a thin, hard shell which requires scarification for abundant germination. In small quantities, mechanical scarification should be avoided as it can harm the seeds. One method is boiling water and placed the seeds in the water and letting it cool. Store in 40% humidity and 40% Fahrenheit in air tight containers, as the seeds have a high moisture content. ³
Growing Area Preparation / Annual Practices for Perennials	<i>L. littoralis</i> do best in moist, well drained sandy soil. Make sure the soil is not too sandy, but remember that they grow on the beaches of the Northwest, so moist soil is ideal. Inoculation with Rhizobium specific to Lupinus spp. can aid overall success particularly when working with a sterile planting soil. ³
Establishment Phase	During this phase, check at least daily to make sure the soil remains

Details	moist. Do not sow more than three seeds per container. ⁴
Length of Establishment Phase	2-3 weeks ⁴
Active Growth Phase	Water daily
Length of Active Growth Phase	3-5 weeks ⁴
Hardening Phase	n/a
Length of Hardening Phase	n/a
Harvesting, Storage and Shipping	n/a
Length of Storage	n/a
Guidelines for Outplanting / Performance on Typical Sites	<i>L. littoralis</i> does not transplant well. The survival rate is lower for transplanting than seeding directly.
Other Comments	n/a
INFORMATION SOURCES	
References	See below
Other Sources Consulted	See below
Protocol Author	Daniel Neyman
Date Protocol Created or Updated	04/23/17

1. "Lupinus littoralis Douglas." Plants Profile for Lupinus littoralis (seashore lupine). USDA, n.d. Web. 26 Apr. 2017.
2. "Lupinus littoralis | seashore lupine | Wildflowers of the Pacific Northwest." Wildflowers. Turner Photography, n.d. Web. 26 Apr. 2017.
3. WTU Herbarium Image Collection - Burke Museum. Burke Museum, n.d. Web. 03 Apr. 2017.<<http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Lupinus&Species=littoralis>>.
4. Pfaf Plant Search. N.p., n.d. Web. 05 June 2017. <<http://www.pfaf.org/User/Plant.aspx?LatinName=Lupinus%2Blittoralis>>.