

Plant Propagation Protocol for *Lupinus nootkatensis*
ESRM 412 – Native Plant Production

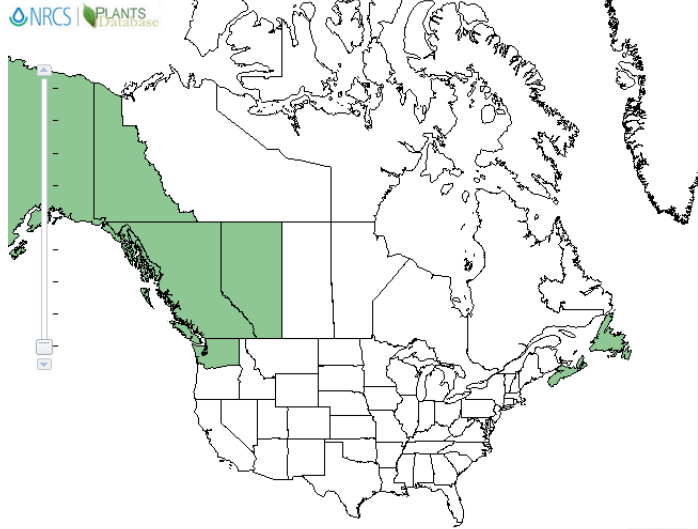
This propagation protocol template was modified by Melissa Rienstra from that available at:
<http://depts.washington.edu/propplnt/plantindex.htm>



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TAXONOMY	
Plant Family	Fabaceae (Bean Family)
Scientific Name	<i>Lupinus nootkatensis</i> Donn ex Sims
Common Name	Nootka lupine, Alaskan lupine
Species Scientific Name	<i>Lupinus nootkatensis</i> Donn ex Sims
Species Code (as per USDA Plants database)	LUNO

GENERAL INFORMATION

Geographical range	 <p>Symbol: LUNO</p> <p>NRCS esri 5</p>
Ecological distribution	Open habitats such as gravel bars, meadows, and tidal marshes. Requires sunny environment and cannot survive in shade ⁴
Climate and elevation range	Low to subalpine range, USDA Zones 3b-8b ¹
Local habitat and abundance	Common, likes to grow in open areas or around river banks ^{4,6} Grows with <i>Lupinus lepidus</i> ⁴
Plant strategy type	Nitrogen fixing species ³
Plant characteristics	Active growing period in Summer, perennial, dies back in winter to a robust rhizome, leaves are palmately compound & up to 6 cm long with hairy undersides, flowers are pea shaped, blue to purple, perfect/bisexual in dense spikes up to 30 cm, fruits are silky pods around 6 cm long ²
PROPAGATION	
Propagation Method	Seeds ²
Product Type	Direct sow outdoors in fall. Can grow in greenhouse in containers Freshly collected seeds need no treatment & can be sown directly. For stored seeds, soak in hot water for 24h or treat with acid ²

Time to Grow	<p>(Porsteinsdóttir)³</p>
Propagule Collection Instructions	In fall allow pods to dry on plant and then break open to collect seeds ¹
Propagule Processing/Propagule Characteristics	10333seeds/pound ⁵ , Seeds in hairy pods, seeds commercially available ³
Pre-Planting Propagule Treatments	If growing indoors seeds need stratification then 24h hot water soak or scarification ⁷
Growing Area Preparation / Annual Practices for Perennial Crops	Planting density from 2560-10240 per acre if outside ⁵ or 18- 24 in apart, Sow in greenhouse in early spring, when plants are big enough to handle put in individual pots ⁷ & outplant in early summer ⁶ Commonly self sows ⁴
Length of Active Growth Phase	Early spring to fall ⁷
Hardening Phase	Plants die back in winter and new shoots form in early Spring ²
Other Comments	Ideal soil pH 6.1-6.5 (Mildly acidic), Fixes nitrogen with root nodules, seeds and roots contain toxic alkaloids but can be consumed if prepared properly through soaking and cooking, can live from 3-30 years, inflorescences are larger on older plants ⁷

INFORMATION SOURCES

References	<p>1 Dave's Garden. Detailed information on Nootka Lupine (<i>Lupinus nootkatensis</i>). Date accessed: 25 April 2015. <http://davesgarden.com/pf/go/51569///>.</p> <p>2 Favorite, Jammie. <i>Nootka Lupine Plant Guide</i>.: USDA Natural Resources Conservation Center</p> <p>3 "NPIN: Native Plant Database." <i>Lady Bird Johnson Wildflower Center</i>. University of Texas Austin, n.d. Web. 25 Apr. 2015. <http://www.wildflower.org/plants/result.php?id_plant=LUNO>.</p> <p>4 Pojar, J. & A. MacKinnon 1994. <i>Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia, and Alaska</i>. Lone Pine Publishing, Redmond, Washington</p> <p>5 United States Department of Agriculture: Natural Resources Conservation Service. PLANTS Profile: <i>Lupinus nootkatensis</i> Donn ex Sims var. <i>nootkatensis</i> Nootka lupine. Date accessed: 25 April 2015. <http://plants.usda.gov/java/charProfile?symbol=LUNO ></p> <p>6 Þorsteinsdóttir, Arna B. "Mapping <i>Lupinus nootkatensis</i> in Iceland Using SPOT 5 Images." Thesis. Lund University, 2011. Web. 25 Apr. 2015. <http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=2224334&fileId=2224335>.</p> <p>7 Donn. Ex Sims. "Pfaff Plant Search." <i>Plants for a Future</i>. N.p., n.d. Web. 25 Apr. 2015. <http://www.pfaf.org/user/Plant.aspx?LatinName=Lupinus%2Bnootkatensis>.</p>
Other Sources	Original Protocol by Linda Arnoldi from the course archive: http://depts.washington.edu/propplnt/plantindex.htm
Protocol Author	Melissa Rienstra
Date Protocol Created or Updated	Updated 4/26/2015