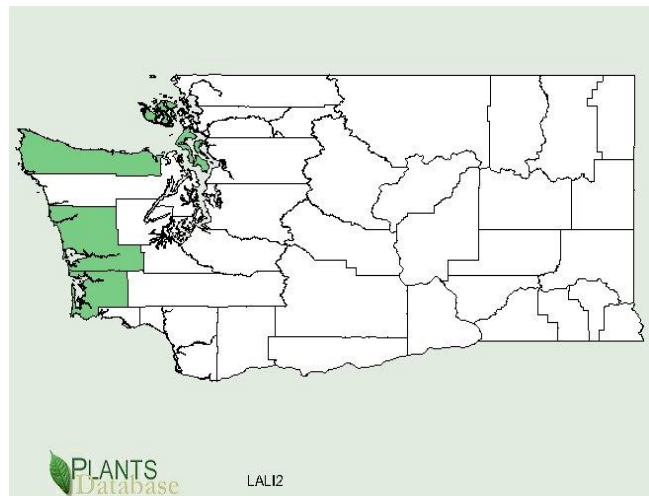
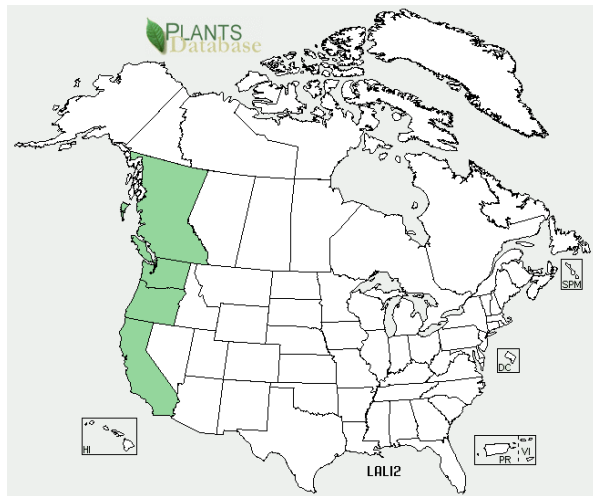


Plant Propagation Protocol for *Lathyrus littoralis*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/LALI2.pdf>



Images from USDA Plants Database^[10]

TAXONOMY	
Plant Family	
Scientific Name	Fabaceae ^[10] .
Common Name	Pea/Legume ^[3] .
Species Scientific Name	
Scientific Name	<i>Lathyrus littoralis</i> (Nutt.) Endl. ^[10] .
Varieties	None
Sub-species	None
Cultivar	None
Common Synonym(s)	None
Common Name(s)	Silky Beach Pea ^[11] , Grey Beach Peavine ^[5] .
Species Code (as per USDA Plants database)	LALI2 ^[10] .
GENERAL INFORMATION	
Geographical range	USA (CA, OR, WA), CAN (BC) ^[10] . *See Distribution Maps
Ecological distribution	Found only on coastal sand dunes ^[2] , and coastal strand communities ^[11] .
Climate and elevation range	Grows only near sea-level on the immediate coast ^[5] .
Local habitat and abundance	Sandy beaches and dunes, upper gravel beaches ^[5] .
Plant strategy type / successional stage	Trails and climbs over other plants, grows near driftwood ^[5] . Nitrogen fixing bacteria allow peas to establish early, or in disturbed areas ^[3] . Best used in neglected or disturbed sites ^[4] .
Plant characteristics	Perennial herb from slender rhizomes, red to purple peavines that lack tendrils ^[5] . 1-2 flowers (12-18mm)

	per raceme, leaflets elliptical to ovate, flattened 1.5-3cm ^[2] . Leaves are compound with an even number of leaflets (6-12) ^[5] . Nitrogen Fixer ^[3] .
PROPAGATION DETAILS From Seed	
Ecotype	Fort Funston, CA ^[11] .
Propagation Goal	Plants ^[11] .
Propagation Method	Seed ^[11] .
Product Type	Container (plug) ^[11] .
Stock Type	1 gallon cans ^[11] .
Time to Grow	Seeds germinate 15 days after sowing ^[11] .
Target Specifications	Root System: Firm plug in container ^[11] .
Propagule Collection Instructions	Seeds are collected between July 1st and August 30th. Mature pods are brown ^[11] . Pick when they turn pale and rattle, then dry until pods split open. Seedlings are hardy and easily handled ^[9] .
Propagule Processing/Propagule Characteristics	10 Seeds/gram ^[11] . After-ripening is critical to pea success. Clean and dry immediately after collection, then store in a permeable paper envelope in a warm and dry environment for several weeks to two months ^[7] .
Pre-Planting Propagule Treatments	Nick the seed with a file or knife, but avoid hitting the eye of the pea ^[1, 6, 9] . Alternately, soak in water for up to 24 hours, then plant immediately to prevent seed rot (do not use this method if seeds are white) ^[1, 6, 9, 11] .
Growing Area Preparation / Annual Practices for Perennial Crops	Fully Controlled Greenhouse: Seeds are sown in flats containing Sunshine Mix #4 Aggregate Plus (peat moss, perlite, major and minor nutrients, gypsum, and dolomitic lime). Seeds are planted 2 times the diameter to depth. Flats are watered by hand. Seeds are sown on June 15th. % Germination: 30% ^[11] . Sow in drills 15cm apart to avoid the need to separate plants later if growing in a garden ^[6, 8] . 2.5cm depth of planting, and avoid firming soil which can produce caps ^[8] .
Establishment Phase Details	Fully Controlled Greenhouse: Seeds germinate 15 days after sowing. Seedlings are transplanted 15 days after germination to individual containers (1 gallon cans) containing 1 part standard potting mix of peat moss, fir bark, perlite, and sand and 1 part sand. Transplant Survival averages 60% ^[11] . Seeds germinate at 13-18°C ^[1] . Sow early to mid-spring ^[8] .
Length of Establishment Phase	30 days ^[11] .
Active Growth Phase	Be tough on plants, allowing them exposure to cold in

	all but the most extreme cases. Plants that grow too quickly will become leggy, or die ^[9] .
Length of Active Growth Phase	Flowering will begin around 12-14 weeks if planted in the spring. Overwintering by planting in Autumn will not flower until the following Spring or early summer ^[9] .
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	Post after-ripening, seeds may be stored in sub-zero temperatures ^[7] . Seeds may also be kept dry and stored at room temperature ^[11] . Hardy seeds handle well ^[9] .
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	Outdoors, sow in deeply dug, well manured soil that is well settled. For overwintering sow in pots in a frame or greenhouse in compost. Keep post moist in winter then outplant in the spring ^[6] .
Other Comments	Propagation from division is possible, but much less successful and difficult than production from seed ^[1] . Refrigerators serve as an acceptable tool for overwintering planted seeds ^[7] .
INFORMATION SOURCES	
References	See Below
Other Sources Consulted	Whitney SR. 1983. A Field Guide to the Cascades & Olympics. Seattle WA, USA: The Mountaineers. pp 126
Protocol Author	Andy Shuckhart
Date Protocol Created or Updated	05/20/14

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Lathyrus littoralis:



Credit: USDA Plants Database. 2014. *Lathyrus littoralis*.