

Plant Propagation Protocol for *Ledum glandulosum*

ESRM 412 – Native Plant Production

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

TAXONOMY	
Plant Family	
Scientific Name	Ericaceae
Common Name	Health Family
Species Scientific Name	
Scientific Name	<i>Ledum glandulosum</i> Nutt.
Varieties	Alternate Name: <i>Rhododendron groenlandicum</i> (Oeder) Kron & Judd ⁱ
Sub-species	
Cultivar	
Common Synonym(s)	<i>Ledum glandulosum</i> Nutt var. <i>californicum</i> (Kellogg) C.L. Hitchc. ⁱⁱ <i>Ledum groenlandicum</i> Oeder subsp. <i>glandulosum</i> (Nutt.) A. Love & D. Love. ⁱⁱⁱ
Common Name(s)	Western labrador tea, trapper's tea, mountain labrador tea
Species Code (as per USDA Plants database)	LEGL
GENERAL INFORMATION	
Geographical range	United States: ID, MT, NV, OR, UT, WA, WY Canada: British Columbia, western Alberta ^{iv}
Ecological distribution	<i>Ledum glandulosum</i> grows in wet environments including bogs, woodlands, wetlands, marshes, muskegs, and subalpine environments. This species prefers acidic soils for best growth with sun to partial shade. ^{v vi}
Climate and elevation range	Acidic and moist soils, low to mid elevations ^{vii}
Local habitat and abundance	<i>Ledum glandulosum</i> grows near <i>Pinus contorta</i> var. <i>contorta</i> , <i>Picea stichensis</i> and <i>Tsuga heterophylla</i> ^{viii}
Plant strategy type / successional stage	Stress tolerator in acidic and rainy climates ^{ix}

Plant characteristics	<p>General: Shrub, requires acidic and well drained soils, sun to partial shade, maximum height is approximately one meter, rhizomatous, can be propagated through cuttings/ division.^{xxi}</p> <p>Flowers: bloom in spring and summer,^{xii} white inflorescence, small, umbels</p> <p>Leaves: evergreen, white pubescence on underside of leaves, alternate, oblong to elliptical^{xiii}</p>
PROPAGATION DETAILS: Information from Plants for A Future^{xiv}	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	Seedling at small shrub size
Time to Grow	From seed sowing to outplanted can be up to 18 months; very slow to germinate and grow
Target Specifications	Small shrub size
Propagule Collection Instructions	Seeds can be collected in fall as soon as fruiting bodies are ripe. They should be cleaned, dried and stored. Seeds can be sown in late winter to early spring and stored in a shady area in a greenhouse.
Propagule Processing/Propagule Characteristics	Seeds should be planted several seeds per cell. Plants should be thinned if more than one grown in cone and transferred to empty cells.
Pre-Planting Propagule Treatments	No pre-treatments for seeds are listed
Growing Area Preparation / Annual Practices for Perennial Crops	<i>Ledum glandulosum</i> should be grown in peaty soils that are lime-free. Grow in small containers and transplant into larger containers once roots have reached the bottom of the container. Plants do best with the addition of their fungal microbes. Adding soil from sites where they typically grown can help with this.
Establishment Phase Details	Use acidic medias like peat when sowing seeds. Add soil from a site where <i>Ledum glandulosum</i> grows to ensure fungal microbes are incorporated. Seeds should be sowed in February or March. They should be placed in a shady spot. This species can withstand temperatures as low as -15 degrees C. Germination rates and times are variable for this species.
Length of Establishment Phase	Varies from a few months to a year
Active Growth Phase	From germination to completion of active growth can be up to 18 months. Although, this can vary within the species because their growth is quite variable. Seedlings should have flowers removed before seeds

	develop in order for the plant to continue allocating resources to its root and shoot systems.
Length of Active Growth Phase	Up to 18 months
Hardening Phase (No details on plant hardening were provided.
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	After 18 months, plants can be transplanted into site from container. They are not established enough before this point to be planted or shipped.
Length of Storage	No details on length of storage were provided.
Guidelines for Outplanting / Performance on Typical Sites	<i>Ledum glandulosum</i> should be planted in acidic soils for best results. This species does well in wet environments with sun to partial shade. They can be shaded out by larger trees or shrubs if canopy is too dense.
Other Comments	Ethnobotanical properties: leaves can be steeped for tea, but caution should be used as this species has some toxicity.
PROPAGATION DETAILS: Information from Plants for A Future^{xvixvi}	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Cuttings
Product Type	Container
Stock Type	Seedling at small shrub size
Time to Grow	From cutting to outplanted can take up to 12 months
Target Specifications	Small shrub size
Propagule Collection Instructions	Cuttings from younger plants (5 to 8 cm in diameter) can be taken in July and August and then planted in the spring. Cuttings from mature plants should be taken in November and December and planted the following fall.
Propagule Processing/Propagule Characteristics	Success rate is approximately 78% for cuttings. This should be taken into consideration when deciding how many cuttings to plant.
Pre-Planting Propagule Treatments	No pre-treatments for seeds are listed
Growing Area Preparation / Annual Practices for Perennial Crops	<i>Ledum glandulosum</i> should be grown in peaty soils that are lime-free. Plants do best with the addition of their fungal microbes. Adding soil from sites where they typically grown can help with this.
Establishment Phase Details	Use acidic medias like peat when sowing seeds. Add soil from a site where <i>Ledum glandulosum</i> grows to ensure fungal microbes are incorporated.
Length of Establishment Phase	Several months up to one year
Active Growth Phase	Cuttings taken can take up to 12 months to complete the active growth phase.

Length of Active Growth Phase	Up to 12 months.
Hardening Phase	No details on plant hardening were provided.
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	N/A
Length of Storage	No details on length of storage were provided.
Guidelines for Outplanting / Performance on Typical Sites	<i>Ledum glandulosum</i> should be planted in acidic soils for best results. This species does well in wet environments with sun to partial shade. They can be shaded out by larger trees or shrubs if canopy is too dense.
Other Comments	
INFORMATION SOURCES	
References	See below for references
Other Sources Consulted	See below for references
Protocol Author	Courtney Bobsin
Date Protocol Created or Updated	04/27/2016

References:

- ⁱ "Plants Profile for *Ledum Glandulosum* (western Labrador Tea)." *Plants Profile for Ledum Glandulosum (western Labrador Tea)*. Web. 27 Apr. 2016. <<http://plants.usda.gov/core/profile?symbol=LEGL>>.
- ⁱⁱ "Plants Profile for *Ledum Glandulosum* (western Labrador Tea)." *Plants Profile for Ledum Glandulosum (western Labrador Tea)*. Web. 27 Apr. 2016. <<http://plants.usda.gov/core/profile?symbol=LEGL>>.
- ⁱⁱⁱ "Plants Profile for *Ledum Glandulosum* (western Labrador Tea)." *Plants Profile for Ledum Glandulosum (western Labrador Tea)*. Web. 27 Apr. 2016. <<http://plants.usda.gov/core/profile?symbol=LEGL>>.
- ^{iv} NPIN: Native Plant Database. (n.d.). Retrieved April 27, 2016, from http://www.wildflower.org/plants/result.php?id_plant=LEGL
- ^v "Trapper's Tea - *Ledum Glandulosum*." *Trapper's Tea - Ledum Glandulosum*. Web. 27 Apr. 2016. <http://montana.plant-life.org/species/ledum_gland.htm>.
- ^{vi} "*Ledum Glandulosum*." *INaturalist.org*. Web. 27 Apr. 2016.
- ^{vii} Pojar, J., MacKinnon, A., & Alaback, P. B. (1994). *Plants of the Pacific Northwest coast: Washington, Oregon, British Columbia & Alaska*. Redmond, WA: Lone Pine Pub.
- ^{viii} USDA. "Bog Labrador Tea." *USDA Plant Guide*. USDA. Web. <http://plants.usda.gov/plantguide/pdf/cs_legr.pdf>.
- ^{ix} Pojar, J., MacKinnon, A., & Alaback, P. B. (1994). *Plants of the Pacific Northwest coast: Washington, Oregon, British Columbia & Alaska*. Redmond, WA: Lone Pine Pub.

^x "Ledum Glandulosum." *INaturalist.org*. Web. 27 Apr. 2016.

^{xi} USDA. "Bog Labrador Tea." *USDA Plant Guide*. USDA. Web. <http://plants.usda.gov/plantguide/pdf/cs_legr.pdf>.

^{xii} "Ledum Glandulosum, Trapper's Tea." *Trapper's Tea, Ledum Glandulosum*. Web. 27 Apr. 2016. <<http://www.americansouthwest.net/plants/wildflowers/ledum-glandulosum.html>>.

^{xiii} "Ledum Glandulosum." *Plant Lust*. Web. 27 Apr. 2016. <<http://plantlust.com/plants/ledum-glandulosum/>>.

^{xiv} *Ledum glandulosum* Labrador Tea, Western Labrador tea PFAF Plant Database. (n.d.). Retrieved April 27, 2016, from [http://www.pfaf.org/user/Plant.aspx?LatinName=Ledum glandulosum](http://www.pfaf.org/user/Plant.aspx?LatinName=Ledum%20glandulosum)

^{xv} *Ledum glandulosum* Labrador Tea, Western Labrador tea PFAF Plant Database. (n.d.). Retrieved April 27, 2016, from [http://www.pfaf.org/user/Plant.aspx?LatinName=Ledum glandulosum](http://www.pfaf.org/user/Plant.aspx?LatinName=Ledum%20glandulosum)

^{xvi} Information from phone call interview with Woodbrook Native Nursery

Other Sources Consulted (but contained no pertinent information):

"Calflora: *Ledum Glandulosum*." *Calflora: Ledum Glandulosum*. Web. 27 Apr. 2016. <[http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Ledum glandulosum](http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Ledum%20glandulosum)>.

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Interview with Bridget McNassar from Oxbow Farm and Conservation Center

Interview with the WA Native Plant Society

"ITIS Standard Report - *Ledum Glandulosum*." *ITIS Standard Report - Ledum Glandulosum*. Web. 27 Apr. 2016. <http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN>.

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