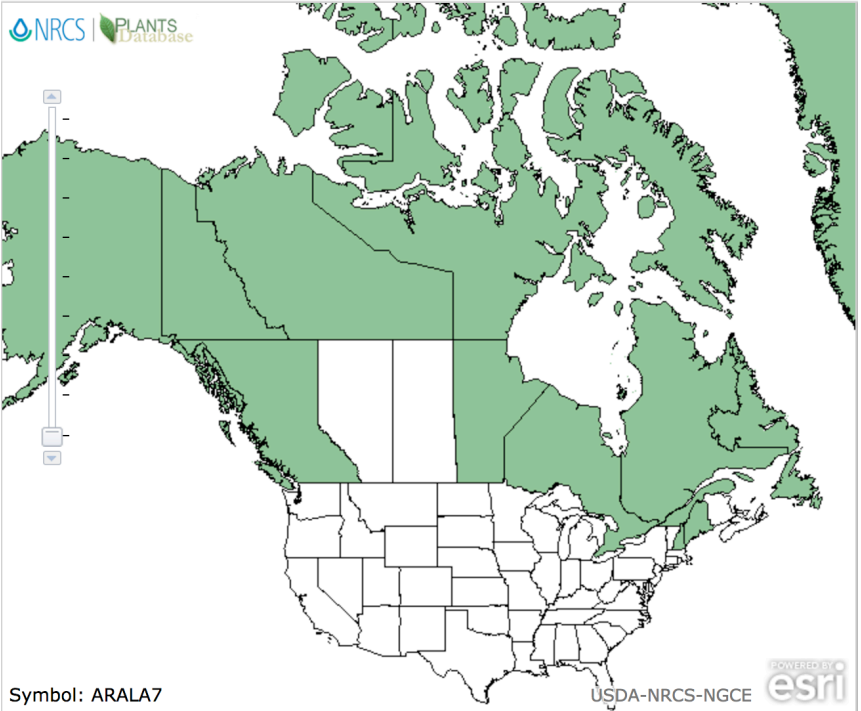


Plant Propagation Protocol for *Arctostaphylos alpina*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/ARAL2.pdf>

TAXONOMY	
Plant Family	
Scientific Name	Ericaceae
Common Name	Heath family
Species Scientific Name	
Scientific Name	<i>Arctostaphylos alpina</i>
Varieties	<i>Arctostaphylos alpina</i> var. <i>alpina</i>
Sub-species	
Cultivar	
Common Synonym(s)	Mountain Bearberry Black Bearberry
Common Name(s)	Alpine Bearberry
Species Code (as per USDA Plants database)	ARAL2
GENERAL INFORMATION	
Geographical range	 <p>Symbol: ARAL47 (USDA.gov)</p>
Ecological distribution	Moors, dry mountain forests, bogs, ¹ tundra, alpine heaths. ²
Climate and elevation range	High altitudes. ³
Local habitat and	Birch, pine, moss. ¹

abundance	
Plant strategy type / successional stage	Early colonizer. Germination can be initiated by wildfire. ⁴
Plant characteristics	Perennial, mat-forming dwarf shrub. Deciduous leaves that turn crimson in fall. ¹
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plant
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	
Time to Grow	Unknown
Target Specifications	5-10cm tall ¹
Propagule Collection Instructions	Fruit (drupe) can be picked from shrubs or from the ground. When many fruits are ripe, fruit can be collected quickly. ⁴
Propagule Processing/Propagule Characteristics	Tough seed coat results in long-lasting seeds. ⁴
Pre-Planting Propagule Treatments	Seed cleaning: fleshy portion can be separated by maceration and flotation. ⁴ Seed coats have chemical germination inhibitors. Remove by soaking seeds in hot water. Wash seeds thoroughly afterward. ⁵ Other treatment options include immersion in sulfuric acid for 3-6 hours, followed by 60-120 days of warm stratification at 20/30 degrees C, followed by 60-90 days of cold stratification at 5 degrees C. ⁴
Growing Area Preparation / Annual Practices for Perennial Crops	Sand, peat, or sand-peat in flats. ⁴
Establishment Phase Details	Even with acid scarification and stratification, germination rate was measured at 50%. ⁴ Sow seeds in autumn and place in shelter away from birds or animals. Water when necessary. ⁵
Length of Establishment Phase	Unknown
Active Growth Phase	Plants require partial sun and moist soil with medium water use. ²
Length of Active Growth Phase	Unknown
Hardening Phase	Unknown
Length of Hardening Phase	Unknown
Harvesting, Storage and Shipping	Unknown
Length of Storage	Unknown
Guidelines for Outplanting / Performance on	5cm of growth. ¹ Flowers in roughly 3 months. ³

Typical Sites	
Other Comments	Var. <i>alpina</i> is listed by US federal government as ‘threatened’ in Maine and New Hampshire. ⁶
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plant
Propagation Method	Vegetative
Product Type	Bare root
Stock Type	Semi-ripe cutting
Time to Grow	unknown
Propagule Collection Instructions	In autumn, select healthy shoot of current season’s growth. Cut just above node with clean pruners. Trim to 10-15cm. ⁵
Pre-Planting Propagule Treatments	If not prepared immediately, put shoots in clear plastic bag and store in a cool place out of sunlight for a few hours or in fridge for a few days. Make a shallow wound (1-2cm) on one side of stem at the base and dip in hormone rooting compound. ⁵
Growing Area Preparation / Annual Practices for Perennial Crops	Strike in nursery bed, spaced 8-10cm apart. ⁵ Use barren, peaty soil. ³
Establishment Phase Details	Water well under mist. Cover to keep humid until rooted. ⁵
Length of Establishment Phase	Unknown
Guidelines for Outplanting / Performance on Typical Sites	Vegetative propagation has much higher success rate than seed propagation. ⁷
INFORMATION SOURCES	
References	See Below
Other Sources Consulted	See Below
Protocol Author	Kari Jessett
Date Protocol Created or Updated	05/24/17

¹ "Luontoportti." *Alpine Bearberry, Arctostaphylos Alpina - Flowers - NatureGate*. N.p., n.d. Web. 24 May 2017. <<http://www.luontoportti.com/suomi/en/kukkakasvit/alpine-bearberry>>.

² "Plant Database." *Lady Bird Johnson Wildflower Center - The University of Texas at Austin*. N.p., n.d. Web. 24 May 2017. <http://www.wildflower.org/plants/result.php?id_plant=ARAL2>.

³ Seymour, Frank Conkling. *The Flora of New England: A Manual for the Identification of All Vascular Plants, including Ferns and Fern Allies and Flowering Plants Growing without Cultivation in New England*. Place of Publication Not Identified: (Privately Printed), 1997. Print.

⁴ Young, James A., and Cheryl G. Young. *Seeds of Woody Plants in North America*. Fairfield, OH: Dioscorides, 2016. Print.

⁵ Toogood, Alan. *Plant Propagation*. 1st ed. New York: DK Pub, 1999. Print. American Ed.

⁶ *Plants Profile for Arctostaphylos Alpina (alpine Bearberry)*. N.p., n.d. Web. 24 May 2017. <<https://plants.usda.gov/core/profile?symbol=ARAL2>>.

⁷ Kruckeberg, Arthur R. *Gardening with Native Plants of the Pacific Northwest: An Illustrated Guide*. Seattle: U of Washington, 1995. Print.

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