

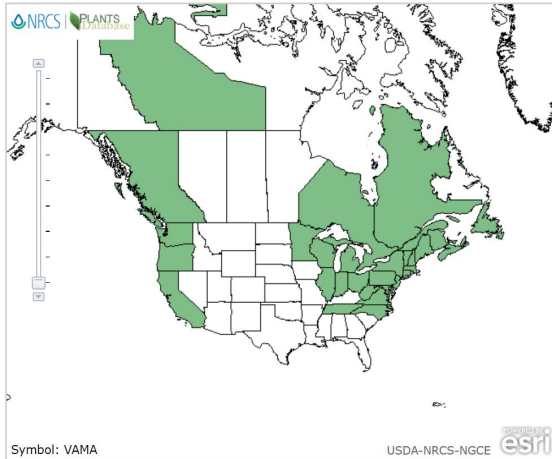
Plant Propagation Protocol for *Vaccinium macrocarpon*

ESRM 412 – Native Plant Production

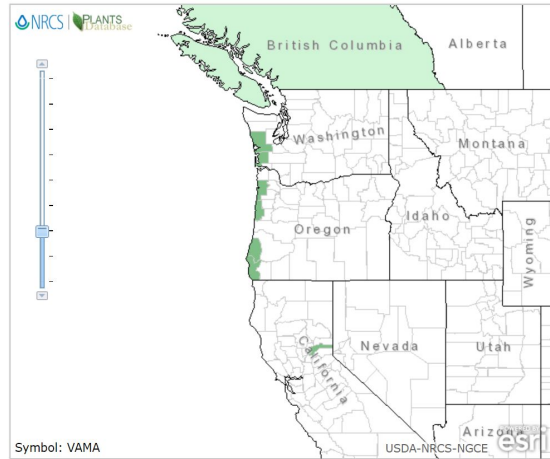
Protocol URL: <https://courses.washington.edu/esrm412/protocols/VAMA.pdf>



Photos¹



North American Distribution¹



Pacific Northwest Distribution¹

TAXONOMY

Plant Family	
Scientific Name	Ericaceae
Common Name	Heath or Heather family
Species Scientific Name	
Scientific Name	<i>Vaccinium macrocarpon</i> Aiton
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	<i>Oxycoccus macrocarpus</i> (Aiton) Pursh
Common Name(s)	cranberry, large cranberry ¹ , lowbush cranberry ²
Species Code (as per USDA Plants database)	VAMA

GENERAL INFORMATION	
Geographical range	Found on the East Coast of Canada and the US from Newfoundland to Long Island, inland to western Ontario and Minnesota. ³ On the West Coast, from British Columbia to California. In Washington, it is found in coastal counties: Grays Harbor and Pacific. See maps above ¹ .
Ecological distribution	<i>V. macrocarpon</i> is an obligate wetland species found in moist bogs, swamps, and along lake shores ^{5,8} .
Climate and elevation range	Latitude: 40-50 degrees North; Longitude: 70-80 degrees West ³ . Hardiness zones 3 to 7 ¹⁰ . Low elevation to about 900 meters ¹¹ .
Local habitat and abundance	Found in cool, moist typically coastal climates. <i>V. macrocarpon</i> requires acidic soils with a pH of about 4.0-5.5 ³ . Grows best in peaty soil with high humus/organic matter content which best supports its mycorrhizal association with the endophytic fungus <i>Phoma radialis</i> ³ .
Plant strategy type / successional stage	Mid-seral species that develops in bogs, swamps, and wetlands but typically after colonization by sedge species ³ .
Plant characteristics	A low, trailing evergreen perennial shrub that forms a groundcover mat ^{2,3} . Grows approximately 8" (0.2m) high by 6 ft (2m) wide ⁵ . Small ¼" to ⅓" (5 to 8 mm) oval, flat leaves that are round-tipped with rolled margins. Leaves are green above and pale, waxy underneath. Flowers are on short 2-3" (5 to 7.5cm) upright stems on slender 1 ¼" (3 cm) pedicels ⁵ . Flowers are small 1.5cm width, have four thin white reflexed petals, and a central cone of 8-10 fused stamens ⁸ . Produces true berries with a shiny, waxy surface that range from pale pink to deep reddish purple ⁵ . <i>V. macrocarpon</i> can live 60-100 years ⁶ .
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Vegetative
Product Type	Container
Stock Type	Wild or Cultivated
Time to Grow	18 months ⁷
Target Specifications	Plants should have well-developed root system before outplanting.

Propagule Collection Instructions	Softwood cuttings collected in April and semi-hardwood cuttings collected in August root very easily, although hardwood cuttings from the fall and winter can also root ⁴ .
Propagule Processing/Propagule Characteristics	Softwood cuttings should be shoots 15cm long ⁶ . Semi-hardwood cuttings may be 5-8 cm long with a heel ⁷ .
Pre-Planting Propagule Treatments	Treat cuttings with 1000 ppm IBA-talc to encourage rooting ⁴ .
Growing Area Preparation / Annual Practices for Perennial Crops	Strike treated cuttings into a peat moss: perlite or sand, peat moss, perlite media ^{4,7} in 1 or 2-gallon containers. <i>V. macrocarpon</i> does not tolerate root disturbance well; limit transplantings ⁶ .
Establishment Phase Details	Keep plants on a mist bench or under a poly/plastic covered frame to retain moisture. Water frequently to ensure a moist soil. Bottom heating may speed rooting process.
Length of Establishment Phase	3-6 months
Active Growth Phase	Once cuttings have rooted, they may be moved from a mist bench so long as they remain well watered. Provide full sun or light exposure and shelter plants from strong winds ⁶ .
Length of Active Growth Phase	3-6 months
Hardening Phase	Prepare seedlings for outplanting site conditions by imitating the anticipated microclimate including sunlight and water availability.
Length of Hardening Phase	3-6 months
Harvesting, Storage and Shipping	Outplant at the beginning of the rainy season to allow maximum natural watering. May be shipped in containers, but consider covering soil to prevent moisture loss.
Length of Storage	After hardening off, outplant during next rainy season.
Guidelines for Outplanting / Performance on Typical Sites	Outplant in acidic, moist soil with full sun. <i>V. macrocarpon</i> is often commercially cultivated in artificial bogs that are flooded in the winter ⁶ . To produce a groundcover, plant about 1m apart ⁹ . Thriving plants will spread quickly. When established, <i>V. macrocarpon</i> will have 3-4ft spread ¹⁰ . Although it may take about 5 years to produce full-bearing crop, a plant may produce for 60-100 years ⁶ .
Other Comments	A popular species for the commercial cranberry industry ² that is known for its medicinal value in clearing and preventing UTIs, cancer prevention, and decreased blood pressure ³ .

INFORMATION SOURCES

References

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	<p>11. Wallace G (2017) “<i>Vaccinium macrocarpon</i>”. Jepson Flora Project, Jepson eFlora, Revision 5. The Jepson Herbarium, University of California Berkeley. Web. Accessed May 25 2019.</p> <p>http://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=47670</p>
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