

**Plant Propagation Protocol for *Rubus nigerrimus* (Greene) Rydb.**

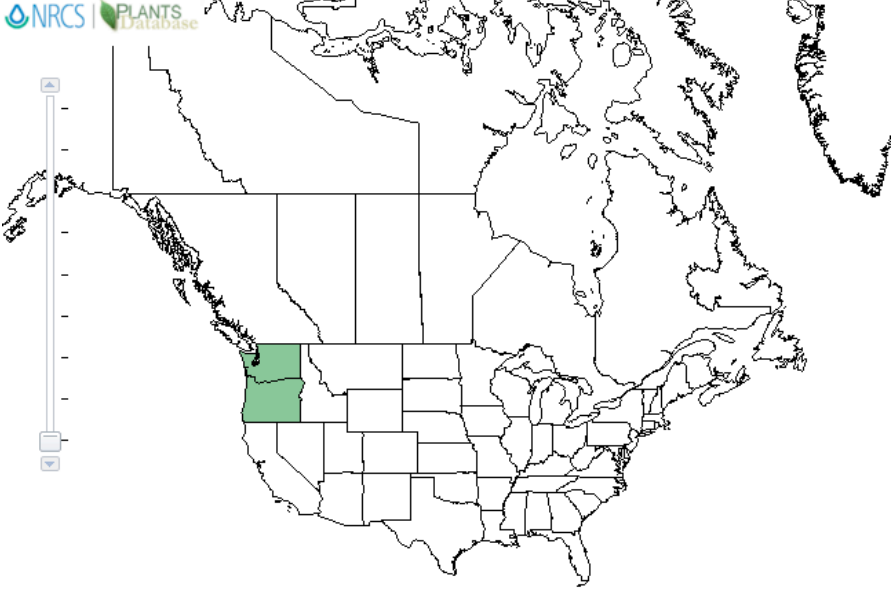


ESRM 412 – Native Plant Production


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

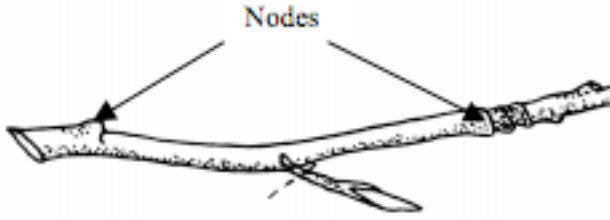


2

TAXONOMY	
Plant Family	
Scientific Name	Rosaceae
Common Name	Rose family
Species	
Scientific Name	
Scientific Name	<i>Rubus nigerrimus</i> (Greene) Rydb.
Varieties	No information found on varieties.
Sub-species	No information was found on sub-species.
Cultivar	
Common Synonym(s)	<i>Rubus leucodermis</i> Dougl. Ex Torr. & Gray var. <i>nigerrimus</i> (Greene) St. John. <sup>5</sup>
Common Name(s)	Dark raspberry, northwest raspberry
Species Code	RUNI
GENERAL INFORMATION	
Geographical range	Native to Washington and Oregon state. <sup>4</sup>

	<div data-bbox="444 197 1333 785">  </div> <div data-bbox="444 869 1333 919"> <p>Symbol: RUNI <span style="float: right;">USDA-NRCS-NGCE  3</span></p> </div> <div data-bbox="444 932 1333 1507">  </div>
Ecological distribution	<p>Moist hillsides, usually along streams.<sup>3</sup></p> <p>Along the Snake River in Whitman County, Washington.<sup>3</sup></p>
Climate and elevation range	<p>200-750 meters, 700-2400 feet.<sup>2</sup></p>
Local habitat and abundance	<p>Associated species include <i>Populus balsamifera ssp. trichocarpa</i>, <i>Crataegus douglasii</i>, <i>Philadelphus lewisii</i>, <i>Rhus glabra</i>, <i>Salix ssp.</i>, and <i>Urtica dioica</i>. Possible direct competitors in known sites include <i>Rubus discolor</i> and <i>Rubus leucodermis</i>.<sup>2</sup></p>
Plant strategy	<p>No information was found on plant strategy or successional stage.</p>

type / successional stage	
Plant characteristics	<p>Rubus nigerrimus is a shrubby perennial. Stems can reach 5 meters long with dense straight or hooked prickles. Leaves are compound with lobed to toothed margins and hairless on both sides. Leaves on flowering stems in groups of 3; leaves on first-year stems in groups of 5 with the lower 2 lacking petioles.<sup>2</sup></p> <p>Flowers are loosely clustered at the ends of the branches. Sepals range from 5-8 millimeters long. Petals are white, sometimes greater than 5 in number, and 4-7 millimeters long. The flowers bloom May to early June.<sup>2</sup></p> <p>The fruits are aggregate drupelets, blackish, and hairless. Fruits ripen late June to mid-July.<sup>2</sup></p>
<b>PROPAGATION DETAILS</b>	
Ecotype	No information was found on previously collected seeds, cuttings, or other propagules.
Propagation Goal	Cuttings.
Propagation Method	Vegetative.
Product Type	Propagules (cuttings).
Stock Type	
Time to Grow	By the end of their first growing season, cuttings will be well established and ready to plant. <sup>1</sup>
Target Specifications	<p>New roots and new leaves at nodes should set by the end of the first season.<sup>1</sup></p>  <p style="text-align: right;">1</p>
Propagule Collection Instructions	<p>Begin cutting as soon as the plant has dropped its leaves.<sup>1</sup></p> <p>Clean pruning shears with rubbing alcohol or a 10% bleach solution to avoid spreading disease. Make cuts just above the leaf node and take no more than 1/20 of the branches for cuttings.<sup>1</sup></p> <p>Select young, straight branches growing from the center of the plant. Take</p>

	<p>shoots that are at least the diameter of a pencil, if possible. Collect long branches.<sup>1</sup></p> <p>Place cuttings in a plastic bag and keep them cool, moist, and out of direct sunlight. They can be stored like this for one week.<sup>1</sup></p> <p>Clean shears with rubbing alcohol or bleach solution. Cut the pieces long enough to have at least two leaf nodes, preferably three or four. The bottom of the cutting should be cut at an angle and the top should be cut straight. Make cuts until the branch becomes too short or too thin.<sup>1</sup></p> <p>If you are not planning to plant the cuttings immediately, store them in bundles with damp sawdust or bark in a cool place.<sup>1</sup></p> <p>Treat the bottom inch of the cutting with rooting hormone.<sup>1</sup></p> <p>Cuttings can then be planted in pots or into outdoor beds. Plant the cuttings deep enough that only one or two nodes are visible above the soil.<sup>1</sup></p> <p>If cuttings are potted and kept outside, protect them from freezing, wind, and full sunlight. If pots are kept inside, they should be kept cool and humid.<sup>1</sup></p> 
Propagule Processing/Propagule Characteristics	No information was found on propagule processing.
Pre-Planting Propagule Treatments	Place cuttings in a plastic bag and keep them cool, moist, and out of direct sunlight. <sup>1</sup>
Growing Area Preparation / Annual Practices for Perennial Crops	Cuttings can be planted in 1-gallon pots or into outdoor beds. Garden soil will work but adding vermiculite, perlite, or sawdust helps retain water and avoids soil compaction. <sup>1</sup>
Establishment Phase Details	Cuttings will be established by the end of their first growing season. <sup>1</sup>
Length of Establishment	One growing season. <sup>1</sup>

Phase	
Active Growth Phase	No information was found on the active growing phase.
Length of Active Growth Phase	No information was found on the active growing phase.
Hardening Phase	No information was found on the hardening phase.
Length of Hardening Phase	No information was found on the active growing phase.
Harvesting, Storage and Shipping	<p>Clean pruning shears with rubbing alcohol or a 10% bleach solution to avoid spreading disease. Make cuts just above the leaf node.<sup>1</sup></p> <p>Select young, straight branches growing from the center of the plant. Take shoots that are at least the diameter of a pencil, if possible. Collect long branches.<sup>1</sup></p>
Length of Storage	Cuttings can be stored for up to one week under ideal conditions. <sup>1</sup>
Guidelines for Outplanting / Performance on Typical Sites	No information was found on out planting or performance on typical sites.
Other Comments	Collect no more than 1/20 of the branches for cuttings from the donor plant. <sup>1</sup>
<b>INFORMATION SOURCES</b>	
References	<p><sup>1</sup>Bohan, H. (2003). Native Plant Propagation: Hardwood Cuttings. Retrieved April 26, 2016, from <a href="https://www.wnps.org/education/resources/documents/Garden_Links/hardwood_cuttings_and-live-stakes.pdf">https://www.wnps.org/education/resources/documents/Garden_Links/hardwood_cuttings_and-live-stakes.pdf</a></p> <p><sup>2</sup>Camp, P., &amp; Gamon, J. G. (2011). <i>Rubus nigerrimus</i> (Greene) Rydb. Retrieved April 26, 2016, from <a href="http://www1.dnr.wa.gov/nhp/refdesk/fguide/pdf/runi.pdf">http://www1.dnr.wa.gov/nhp/refdesk/fguide/pdf/runi.pdf</a></p> <p><sup>3</sup>Gamon, J. (2016). WTU Herbarium Image Collection - Burke Museum. Retrieved April 27, 2016, from <a href="http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Rubus">http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Rubus</a></p> <p><sup>4</sup>Kartesz, J. T. (2002). Plants Profile for <i>Rubus nigerrimus</i> (dark raspberry). Retrieved April 26, 2016, from <a href="http://plants.usda.gov/core/profile?symbol=runi">http://plants.usda.gov/core/profile?symbol=runi</a></p> <p><sup>5</sup>U.S. Fish and Wildlife Service. (1996). ITIS Standard Report: <i>Rubus nigerrimus</i> (Greene) Rydb. Retrieved April 26, 2016, from <a href="http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN">http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN</a></p>

Other Sources Consulted	<p>Abrams, L., &amp; Ferris, R. S. (1990). An Illustrated Flora of the Pacific States: Polygonaceae to Krameriaceae, buckwheats to kramerias. Retrieved April 27, 2016, from <a href="https://books.google.com/books?id=Md_4wQqO5uQC">https://books.google.com/books?id=Md_4wQqO5uQC</a></p> <p>Burke Museum. (2004). Herbarium Database. Retrieved April 26, 2016, from <a href="http://www.burkemuseum.org/research-and-collections/botany-and-herbarium/collections/database/results.php?Genus=Rubus">http://www.burkemuseum.org/research-and-collections/botany-and-herbarium/collections/database/results.php?Genus=Rubus</a></p> <p>Consortium of Pacific Northwest Herbaria. (2004). CPNWH Database Search. Retrieved April 26, 2016, from <a href="http://www.pnwherbaria.org/data/results.php?DisplayAs=WebPage">http://www.pnwherbaria.org/data/results.php?DisplayAs=WebPage</a></p> <p>Discover Life. (2016). Rubus nigerrimus - Dark raspberry -- Discover Life. Retrieved April 27, 2016, from <a href="http://www.discoverlife.org/mp/20q?search=Rubus+nigerrimus">http://www.discoverlife.org/mp/20q?search=Rubus nigerrimus</a></p> <p>Giblin, D. (2010). Washington Flora Checklist. Retrieved April 26, 2016, from <a href="http://biology.burke.washington.edu/herbarium/waflora/checklist.php?Taxon=Rubus+nigerrimus">http://biology.burke.washington.edu/herbarium/waflora/checklist.php?Taxon=Rubus nigerrimus</a></p> <p>Nature Serve Explorer. (2009). Comprehensive Report Species - Rubus nigerrimus. Retrieved April 26, 2016, from <a href="http://explorer.natureserve.org/servlet/NatureServe?searchName=Rubus+nigerrimus">http://explorer.natureserve.org/servlet/NatureServe?searchName=Rubus nigerrimus</a></p>
Protocol Author	Carolyn Hartman
Date Protocol Created or Updated	04/27/16