

Plant Propagation Protocol for *Rubus pubescens*

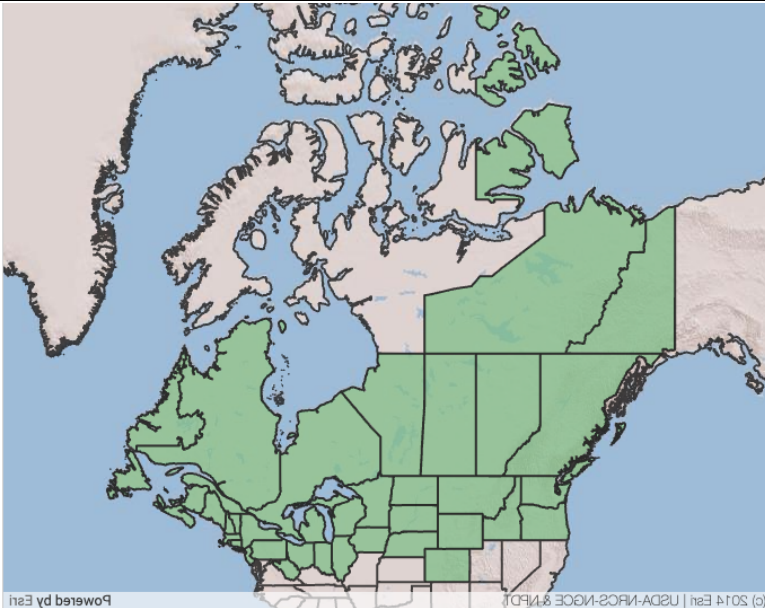

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2024/RUPUP.pdf>



Source: Smith, R.W., Wildflower Center Digital Library

TAXONOMY	
Plant Family	
Scientific Name	Rosaceae Juss.
Common Name	Rose
Species Scientific Name	
Scientific Name	<i>Rubus pubescens</i> Raf.
Varieties	<i>Rubus pubescens</i> Raf. var. <i>pubescens</i> <i>Rubus pubescens</i> Raf. var. <i>pilosifolius</i> A.F. Hill
Sub-species	
Cultivar	
Common Synonym(s)	<i>Rubus saxatilis</i> var. <i>canadensis</i> ⁹ <i>Cylactis pubescens</i> (Raf.) W.A. Weber <i>Rubus triflorus</i> Richardson

Common Name(s)	dwarf red blackberry, dwarf red raspberry, dewberry
Species Code (as per USDA Plants database)	RUPUP; RUPUP2
GENERAL INFORMATION	
Geographical range	 <p>Source: USDA Plants</p>  <p>Source: USDA Plants</p> <p>*County data unavailable for Oregon</p> <p>var. <i>pilosifolius</i>: Found in eastern Canada provinces (Quebec, Newfoundland, New Brunswick) and in New England US states.</p>

	var. <i>pubescens</i> : Found in northern US states, all of Canada but the northwestern territories.
Ecological distribution	Occurs in moist mixed wood, conifer, boreal forests, especially in forest openings. ³
Climate and elevation range	Ranges from montane to coastal elevations. ⁵ Elevation range: 0-2200 m. ²
Local habitat and abundance	Found in temperate forested areas in Washington. ⁵ Associated with bunberry (<i>Cornus canadensis</i>), wild lily of the valley (<i>Maianthemum canadensis</i>), and goldthread (<i>Coptis trifolia</i>). ⁵
Plant strategy type / successional stage	Can spread quickly by rhizomes, making it an important species for groundcover after low and moderate-intensity disturbance. ⁵
Plant characteristics	Herbaceous perennial with trailing stems and slender runners. ⁴ 4 to 6 inches in height. Alternating leaves with three leaflets. Leaflets are 1 to 3 in long with edges double toothed. 1 to 3 stalked white, occasionally pink, flowers at tips of stems. ¹ Flowers May to July. Flowers contain both female and male reproductive parts. ² Fruit is a red to dark red round cluster of drupelets when mature. ¹ Ripens late in summer and can be difficult to remove. ³
PROPAGATION DETAILS: FROM SEED	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	160 mL conetainer
Time to Grow	No information available for <i>Rubus pubescens</i> . 11 months for <i>Rubus idaeus</i> L. ⁶
Target Specifications	Multiple leaves, roots form firm plug
Propagule Collection Instructions	Collect fruits by hand or machine in August when fruit is red. ⁶ Extract seeds by macerating fruits in water and screen out the pulp. A blender can also be used. ⁵
Propagule Processing/Propagule Characteristics	Clark and Moore (1993) found seeds still viable after 26 years with proper storage. ⁵ <i>Rubus</i> seeds are present in the forest floor even after the species is gone from the site, indicating that <i>Rubus</i> seeds remain viable for extended periods of time despite fluctuating environmental conditions. ⁵ No information on seed density.
Pre-Planting Propagule Treatments	After collection, seeds should be dried and kept at 4 to 5 °C. ⁵

	Treat seeds with 1% sodium hypochlorite for 10 minutes and nick seed to expose radicle. Cold stratification for 60-120 days. ⁵
Growing Area Preparation / Annual Practices for Perennial Crops	Plant stratified/scarified seeds in spring, late summer, or early fall. Cover with 3-5 mm of soil. Adding mulch during winter helps prevent drying and freezing of soil. ⁵ Keep in outdoor nursery. ⁶
Establishment Phase Details	Irrigate when media is dry on surface. Germination is most likely non-uniform ⁶
Length of Establishment Phase	No information available for <i>Rubus pubescens</i> . 8 weeks (for <i>Rubus idaeus</i> L.). ⁶
Active Growth Phase	Seedlings will begin to produce multiple leaves and should be continuously fertilized with NPK. ⁶
Length of Active Growth Phase	No information available for <i>Rubus pubescens</i> . 16 weeks (for <i>Rubus idaeus</i> L.). ⁶
Hardening Phase	Irrigation is reduced and plants are watered one last time before winter. ⁶
Length of Hardening Phase	No information available for <i>Rubus pubescens</i> . 8 weeks (for <i>Rubus idaeus</i> L.). ⁶
Harvesting, Storage and Shipping	Overwinter in outdoor nursery by insulating with foam cover and snow. ⁶
Length of Storage	No information available.
Guidelines for Outplanting / Performance on Typical Sites	No information available.
Other Comments	
PROPAGATION DETAILS: VEGETATIVE	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Vegetative
Product	Container
Stock Type	1 gallon
Time to Grow	No information available.
Target Specifications	Small shrub.
Propagule Collection Instructions	Find a trailing stem and identify dewberry nodes that have had contact with the soil as these may already have roots. ⁷ Trailing stem may have multiple possible divisions. Cut by the node at an angle. ⁷ Shoots can be bent and placed in soil to encourage root development before propagule collection.

Propagule Processing/Propagule Characteristics	Store cuttings in cooler, 34-37 degrees F at 80% relative humidity. Re-moisten if necessary. ⁸
Pre-Planting Propagule Treatments	Moisten the divided plants and dip cut end in rooting hormone. ⁷
Growing Area Preparation / Annual Practices for Perennial Crops	One gallon pot with peat moss or a good loam. ⁷
Establishment Phase Details	To stimulate stronger root growth, clip off new leaf growths as they grow. ⁷
Length of Establishment Phase	Roots will grow/strengthen within 4-6 weeks. ⁷
Active Growth Phase	No information available.
Length of Active Growth Phase	No information available.
Hardening Phase	No information available.
Length of Hardening Phase	No information available.
Harvesting, Storage and Shipping	No information available.
Length of Storage	No information available.
Guidelines for Outplanting / Performance on Typical Sites	No information available.
Other Comments	
INFORMATION SOURCES	
References	<ol style="list-style-type: none"> 1. <i>Rubus pubescens</i> (Dwarf Raspberry): Minnesota Wildflowers. (n.d.). Www.minnesotawildflowers.info. Retrieved May 21, 2024, from https://www.minnesotawildflowers.info/flower/dwarf-raspberry 2. FNA Ed Committee. (2014). <i>Flora of North America North of Mexico. Vol. 9, Magnoliophyta : Picramniaceae to Rosaceae</i>. Oxford University Press. 3. <i>Rubus pubescens</i> Raf. (2024). Northern Ontario Plant Database. 4. Johnson, D. (2020). <i>PLANTS OF THE WESTERN FOREST : alaska to minnesota boreal and aspen parkland</i>. Partners Publishing. 5. <i>Rubus pubescens</i> Encyclopedia of Puget Sound. (2013). Www.eopugetsound.org. https://www.eopugetsound.org/content/rubus-pubescens

	<p>6. Luna, Tara; Corey, Susan; Wick, Dale. 2008. Propagation protocol for production of Container (plug) <i>Rubus idaeus</i> L. plants 160 ml containers; USDI NPS - Glacier National Park West Glacier, Montana. In: Native Plant Network. URL: https://NativePlantNetwork.org (accessed 2024/05/22). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.</p> <p>7. Yan, P. (2022, October 18). <i>How to Identify & Propagate Dewberry (Rubus pubescens)</i>. Eco Friendly Income. https://www.ecofriendlyincome.com/blog/how-to-identify-propagate-dewberry-rubus-pubescens</p> <p>8. Scianna, Joe. 2003. Propagation protocol for production of Container (plug) <i>Rubus idaeus</i> L. plants One-gallon and 4.5-inch azalea pots, depending on plant size.; USDA NRCS - Bridger Plant Materials Center Bridger, Montana. In: Native Plant Network. URL: https://NativePlantNetwork.org (accessed 2024/05/22). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.</p> <p>9. <i>Rubus pubescens</i> / <i>International Plant Names Index</i>. (n.d.). Www.ipni.org. Retrieved May 22, 2024, from https://www.ipni.org/n/284431-2</p>
Other Sources Consulted	<p>Reed, B., S. Poothong, & Hall, H. K. (2017). Propagation of blackberries and related <i>Rubus</i> species. <i>CABI EBooks</i>, 101–112. https://doi.org/10.1079/9781780646688.0101</p> <p>Debnath, S. C. (2004). Clonal Propagation of Dwarf Raspberry (<i>Rubus pubescens</i> Raf.) through in vitro Axillary Shoot Proliferation. <i>Plant Growth Regulation</i>, 43(2), 179–186. https://doi.org/10.1023/b:grow.0000040110.53216.6a</p>
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