

## Plant Propagation Protocol for *Spiraea tomentosa*

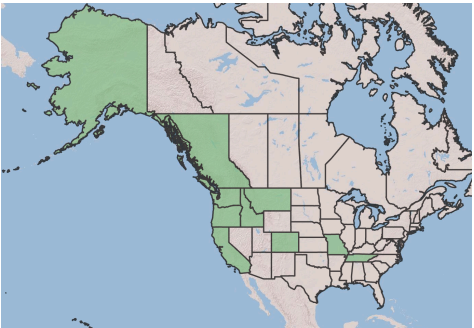

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2022/SPTO2.pdf>



Image of *Spiraea tomentosa*<sup>11</sup>

TAXONOMY	
Plant Family	
Scientific Name	Rosaceae
Common Name	Rose family
Species Scientific Name	
Scientific Name	<i>Spiraea tomentosa</i> L. <sup>1</sup>
Varieties	var. <i>douglasii</i> <sup>9</sup> var. <i>menziesii</i> <sup>9</sup>
Sub-species	None
Cultivar	None
Common Synonym(s)	<i>Spiraea douglasii</i> Hook. <sup>4</sup> <i>Spiraea tomentosa</i> var. <i>Rosea</i> <sup>8</sup> <i>Spiraea tomentosa</i> var. <i>Tomentosa</i> <sup>8</sup>
Common Name(s)	Douglas spirea, Western spirea, hardhack, steeplebush, meadowsweet, and pink spirea. <sup>9</sup>

Species Code (as per USDA Plants database)	SPT02 <sup>8</sup>
<b>GENERAL INFORMATION</b>	
Geographical range	 <p>Geographical range of <i>Spiraea tomentosa</i><sup>6</sup></p>  <p>County range of <i>Spiraea tomentosa</i><sup>6</sup></p>
Ecological distribution	Found in swamps, flood plains, gravel bars, streams and in areas that receive variable water flow. <sup>7</sup>
Climate and elevation range	The elevation range is sea-level to 6,500 ft in the mountains (low to mid elevations). <sup>4</sup>
Local habitat and abundance	Usually along wetland habitats such as streams, bogs, and wet meadows. <sup>9</sup> Hardhack grow well along salal ( <i>Gaultheria shalom</i> ), or with sweet gale ( <i>Myrica gale</i> ), and salmon berry ( <i>Rubus spectabilis</i> ). <sup>7</sup>
Plant strategy type / successional stage	Can be found at all stages of succession, but they seem to achieve their greatest stature and best growth following disturbances—such as flooding—removing overtopping trees allowing for more light and other available resources. <sup>2</sup>

Plant characteristics	<i>Spiraea tomentosa</i> is a perennial shrub with oblong leaves, usually toothed on the upper half, and grow to 4in long. Many small flowers bloom in dense, spire-like panicles 8in long. The flowers are light to dark pink, blooming from early to late summer. <sup>9</sup> The fruits cluster in several small, smooth, pod-like follicles and remain on the shrub after the leaves have fallen. <sup>4</sup>
<b>PROPAGATION DETAILS (SEED)</b>	
Ecotype	None
Propagation Goal	Plants
Propagation Method	Seed <sup>7</sup>
Product Type	Container (plug) <sup>6</sup>
Stock Type	160 ml conetainers <sup>6</sup>
Time to Grow	8 months <sup>6</sup>
Target Specifications	Not found
Propagule Collection Instructions	<p>It is noted for <i>Spiraea douglasii</i> (Hardhack), seeds are collected in fall when the fruits turn dry and brown and then extracted from the capsules by shaking or tumbling. There are no specifications for <i>Spiraea tomentosa</i>.<sup>4</sup></p> <p>Another source states that seeds and cuttings should be taken anytime from August to October for most <i>Spiraea</i>.<sup>8</sup></p>
Propagule Processing/Propagule Characteristics	Not found
Pre-Planting Propagule Treatments	<p>One source says there are no Pre-Planting Propagule Treatments for <i>Spiraea tomentosa</i>.<sup>9</sup></p> <p>Another source specifies that seeds for <i>Spiraea douglasii</i> should be stratified for 2 months in mesh bags, between layers of peat, at 2°C. And soak seeds for 24 hours prior to stratification.<sup>5</sup></p>

Growing Area Preparation / Annual Practices for Perennial Crops	<p>Growing area preparation for a similar species the Meadowsweet (<i>Spiraea corymbosa</i>), states that preparation is necessary in a greenhouse with alternating day/night temperatures. Place trays under continuous fluorescent light and mist (4-second duration at 15 min intervals) during germination. After germination seedlings are given extended 14 hour days under high intensity lights from 4:30-10:30 p.m.<sup>3</sup></p> <p>No specifications found for <i>Spirea tomentosa</i>.</p>
Establishment Phase Details	<p>For <i>Spiraea corymbosa</i> (Meadowsweet), it was noted that Seedlings germinated quickly but failed to put on much growth during January and February. Seedlings were transplanted 50-60 days post germination to larger containers in clumps as individuals were too small to separate. They were grown under extended (14-hour) day length. Plants were thinned. Foliage was cut back at about 3" to encourage development of stronger, less succulent, stems.<sup>3</sup></p> <p>No specifications found for <i>Spirea tomentosa</i>.</p>
Length of Establishment Phase	Not found
Active Growth Phase	Not found
Length of Active Growth Phase	<p>For <i>Spiraea corymbosa</i> (Meadowsweet) in April. Plugs filled out in April and May and were ready for field planting in June.<sup>3</sup></p> <p>No specifications found for <i>Spirea tomentosa</i>.</p>
Hardening Phase	<p>For <i>Spiraea corymbosa</i> (Meadowsweet), plugs are set outdoors in a protected location out of direct sun for about 2 weeks prior to outplanting in the intended out planting site.<sup>3</sup></p> <p>No specifications found for <i>Spirea tomentosa</i>.</p>
Length of Hardening Phase	Not found

Harvesting, Storage and Shipping	<p>For <i>Spiraea corymbosa</i> (Meadowsweet), growth varies between 17-24 weeks to finished size. (Longer finishing time could be due to unreliable heat in an greenhouse setting and the larger plug sizes in the multipots.) Seedlings are lined out in the woody beds as plugs, grown for two years before bare root harvest. Specimen plants are bumped up to the next larger container size approximately yearly and held during the growing season in a shade house.<sup>3</sup></p> <p>No specifications found for <i>Spirea tomentosa</i>.</p>
Length of Storage	<p>For <i>Spiraea corymbosa</i> (Meadowsweet), 3-4 months in cooler at 40 degrees, 35% relative humidity.<sup>3</sup></p> <p>No specifications found for <i>Spirea tomentosa</i>.</p>
Guidelines for Outplanting / Performance on Typical Sites	Not found
Other Comments	Not found
<b>PROPAGATION DETAILS (CUTTINGS)</b>	
Ecotype	None
Propagation Goal	Cuttings
Propagation Method	Vegetative
Product Type	Not found
Stock Type	Not found
Time to Grow	Not found
Target Specifications	Not found
Propagule Collection Instructions	<p>Seeds and cuttings should be taken anytime from August to October.<sup>8</sup></p> <p>Another source states to take cuttings in mid-June.<sup>3</sup></p> <p>Specific instructions not found</p>
Propagule Processing/Propagule Characteristics	None found

Pre-Planting Propagule Treatments	One source specifies to dip the cuttings in 3,000-parts-per-million indole-3-butyric acid (IBA) talc before sticking the cuttings into sand in an outdoor frame and applying bottom heat. <sup>2</sup>
Growing Area Preparation / Annual Practices for Perennial Crops	None found
Establishment Phase Details	They will root in 2 to 4 weeks and can be transplanted immediately. <sup>2</sup>
Length of Establishment Phase	Not found
Active Growth Phase	Not found
Length of Active Growth Phase	Not found
Hardening Phase	Not found
Length of Hardening Phase	Not found
Harvesting, Storage and Shipping	Not found
Length of Storage	Not found
Guidelines for Outplanting / Performance on Typical Sites	Not found
Other Comments	N/A
<b>INFORMATION SOURCES</b>	

References	<ol style="list-style-type: none"> <li>1. Bonner, F. T., &amp; Karrfalt, R. P. (2008). Spiraea L. In <i>The Woody Plant Seed Manual</i> (pp. 1067-1068). U.S. Dept. of Agriculture, Forest Service.</li> <li>2. <i>The context for wilderness restoration</i> - <a href="https://winapps.umd.edu/">winapps.umd.edu</a>. (n.d.). Retrieved May 25, 2022, from <a href="https://winapps.umd.edu/winapps/media2/wilderness/toolboxes/documents/restoration/pdf06232815dpi72pt02.pdf">https://winapps.umd.edu/winapps/media2/wilderness/toolboxes/documents/restoration/pdf06232815dpi72pt02.pdf</a></li> <li>3. Englert, J. (n.d.). <i>Reforestation, nurseries and genetics resources</i>. RNGR. Retrieved May 25, 2022, from <a href="https://rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-spiraea-1116">https://rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-spiraea-1116</a></li> <li>4. Darris, Dale, and Pete Gonzales. "Rose Spirea Fact Sheet." NRCS Plant Fact Sheet. USDA NRCS, Sept. 2009. Web. 23 Apr. 2014.</li> <li>5. Elgort, M., John, (2001). <i>Reforestation, nurseries and genetics resources</i> - <a href="https://npg.rngr.net/">NPN.RNGR.NET</a>. Propagation protocol for production of Plug + (container-field grown hybrids) <i>Spiraea corymbosa</i> plants. Retrieved May 25, 2022, from <a href="https://npg.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-spiraea-200">https://npg.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-spiraea-200</a></li> <li>6. Luna, T., Corey, S., Evans, J., Wick, D., &amp; Hosokawa, J. (n.d.). <i>Reforestation, nurseries and genetics resources</i> - <a href="https://npg.rngr.net/">NPN.RNGR.NET</a>. Propagation protocol for production of Container (plug) <i>Spiraea betulifolia</i> Pallas plants 160 ml conetainers. Retrieved May 25, 2022, from <a href="https://npg.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-spiraea-200">https://npg.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-spiraea-200</a></li> <li>7. Pettinger, A., &amp; Costanzo, B. (2003). <i>Native plants in the Coastal Garden: A guide for gardeners in the Pacific Northwest</i>. Timber Press.</li> <li>8. <i>Plant database</i>. Lady Bird Johnson Wildflower Center - The University of Texas at Austin. (n.d.). Retrieved May 24, 2022, from <a href="https://www.wildflower.org/plants/result.php?id_plant=spto2">https://www.wildflower.org/plants/result.php?id_plant=spto2</a></li> <li>9. Robson, K. A., Richter, A., &amp; Filbert, M. (2008). <i>Encyclopedia of northwest native plants for gardens and landscapes</i>. Timber Press.</li> <li>10. <i>Spiraea douglasii</i> Hook. <i>rose spirea</i>. USDA plants database. (n.d.). Retrieved June 9, 2022, from <a href="https://plants.usda.gov/home/plantProfile?symbol=SPDO">https://plants.usda.gov/home/plantProfile?symbol=SPDO</a></li> <li>11. <i>Spiraea tomentosa</i>. <i>Spiraea tomentosa</i> (Hardbark Spiraea, Hardhack, Spiraraea, Steeplebush)   North Carolina Extension Gardener Plant Toolbox. (n.d.). Retrieved May 24, 2022, from <a href="https://plants.ces.ncsu.edu/plants/spiraea-tomentosa/">https://plants.ces.ncsu.edu/plants/spiraea-tomentosa/</a></li> </ol>
Other Sources Consulted	
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