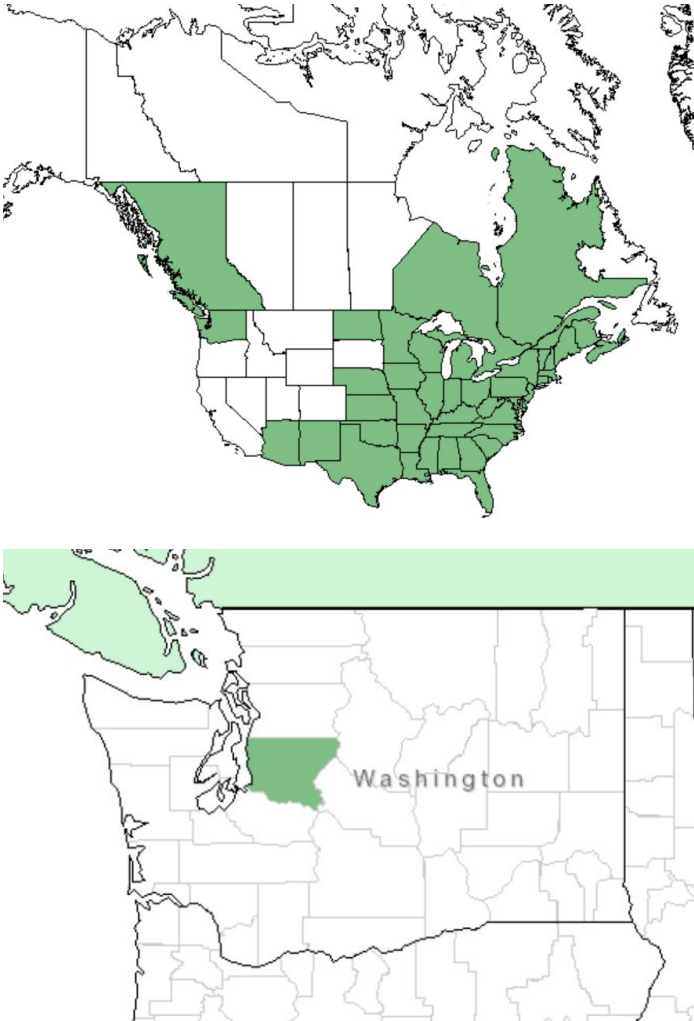


**Plant Propagation Protocol for *Prunus serotina***

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/PRSE2.pdf>

<b>TAXONOMY</b>	
<b>Plant Family</b>	
Scientific Name	Rosaceae
Common Name	Rose Family
<b>Species Scientific Name</b>	
Scientific Name	<i>Prunus serotina</i> Ehrh.
Varieties	<i>Prunus serotina</i> ssp. <i>capuli</i> ; <i>Prunus serotina</i> var. <i>eximia</i> ; <i>Prunus serotina</i> var. <i>rufula</i> ; <i>Prunus serotina</i> var. <i>serotina</i> ; <i>Prunus serotina</i> var. <i>virens</i> <sup>1</sup>
Sub-species	None.
Cultivar	
Common Synonym(s)	<i>Cerasus capollin</i> Ser. ex DC.; <i>Cerasus longifolius</i> Nutt. ex Torr. & A. Gray; <i>Cerasus serotina</i> (Ehrh.) Loisel.; <i>Padus serotina</i> (Ehrh.) Borkh.; <i>Prunus salicifolia</i> Kunth <sup>5</sup>
Common Name(s)	Black Cherry, Mountain Black Cherry, Wild Black Cherry, Rum Cherry <sup>1</sup> ; Cabinet Cherry; Capulin Black Cherry; Escarpment Cherry <sup>5</sup>
Species Code (as per USDA Plants database)	PRSE2 <sup>1</sup>
<b>GENERAL INFORMATION</b>	

<p>Geographical range</p>	 <p>Widespread in eastern North America, particularly between 49°N and 30°N<sup>5</sup>, and known to be highly invasive in Holland<sup>1</sup></p>
<p>Ecological distribution</p>	<p>USDA Plant Hardiness Zones 3-9<sup>4</sup> (prefers minimum temperatures between -40°C and 0°C)</p>
<p>Climate and elevation range</p>	<p>Grows at elevations of 0-1250m<sup>1</sup> and is cold tolerant, and can grow in shady or sunny conditions, as well as in soils of both high and low pHs<sup>2</sup></p>
<p>Local habitat and abundance</p>	<p>Sunny open areas or in successional vegetation<sup>1</sup> Also likes fence rows; roadsides; old fields, thickets, woodlands, canyons, floodplains, and lower riparian slopes<sup>2</sup></p>

Plant strategy type / successional stage	Tree shape/growth will change depending on crowding factor-trees are shrubby with plentiful growing space, but tall and slender when crowded <sup>2</sup> Can become shade-intolerant <sup>1</sup>
Plant characteristics	Perennial deciduous tree <sup>2</sup>
<b>PROPAGATION DETAILS</b>	
Ecotype	Based on propagation of Black Cherry by John Englert, with seed collected at National Capital Parks in 1997 <sup>6</sup>
Propagation Goal	Seedlings
Propagation Method	Seed
Product Type	Plug <sup>6</sup>
Stock Type	Container-filled grown hybrids <sup>6</sup>
Time to Grow	N/A
Target Specifications	36-48 inch seedlings with full, fibrous root systems <sup>6</sup>
Propagule Collection Instructions	Collect fruit when it is ripe and in full color <sup>4</sup>
Propagule Processing/Propagule Characteristics	Use a Dybvig separator to remove flesh <sup>6</sup> and briefly air dry the seeds <sup>4</sup> 4,600 seeds/kg with 100% purity have a germination of approximately 10% <sup>6</sup>
Pre-Planting Propagule Treatments	Warm stratification for 1-2 months in moist sand (greenhouse setting around 50-68°F) <sup>4</sup> followed by 2-3 months cold stratification <sup>5</sup> in 36-41°F <sup>4</sup> or sow seeds outdoors and use winter weather for natural stratification <sup>6</sup>
Growing Area Preparation / Annual Practices for Perennial Crops	Outdoor nursery beds are hand-sown with seed <sup>6</sup>
Establishment Phase Details	Sow in October and sprinkle with Endomycorrhizae as well as cover with ½ inch of soil and mulch with

	aged sawdust (scraped back for emergence in spring) <sup>6</sup>
Length of Establishment Phase	Up to 18 months <sup>5</sup>
Active Growth Phase	Fertilization may be necessary based on soil nutrients where seedlings were planted (a granular 10-10-10 was applied once a week until early June and was alternated with a granular urea until late July,, and then applied every other week through August) accompanied by irrigation <sup>6</sup>
Length of Active Growth Phase	Approximately 4 months (mid-April through late-August) <sup>6</sup>
Hardening Phase	Fertilization and irrigation are reduced through September <sup>6</sup>
Length of Hardening Phase	1 month <sup>6</sup>
Harvesting, Storage and Shipping	Air dried seeds can be stored in temperatures of 31-41°F <sup>4</sup> and relative humidity of 35% <sup>6</sup> Bareroot seedlings required 1 year in the field before harvest (in December) and can be stored in bundles with long roots trimmed/covered in sawdust at 40°F; container plants required an additional year before harvest and could be stored outside under 2 layers of microfoam insulating blanket <sup>6</sup>
Length of Storage	3 months for seeds, seedlings, and container plants (December-March) <sup>6</sup>
Guidelines for Outplanting / Performance on Typical Sites	Plant in late spring or early summer <sup>5</sup>
Other Comments	
References	1. Plants Profile for <i>Prunus serotina</i> (black cherry). (n.d.). Retrieved May 15, 2018, from <a href="https://plants.usda.gov/core/profile?symbol=p_rse2">https://plants.usda.gov/core/profile?symbol=p_rse2</a>

	<ol style="list-style-type: none"> <li>2. Plant Database. (n.d.). Retrieved May 15, 2018, from  <a href="https://www.wildflower.org/plants/result.php?id_plant=prse2">https://www.wildflower.org/plants/result.php?id_plant=prse2</a></li> <li>3. Prunus serotina - Plant Finder. (n.d.). Retrieved May 15, 2018, from  <a href="http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=a914">http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=a914</a></li> <li>4. Prunus serotina - Ehrh. (n.d.). Retrieved May 15, 2018, from  <a href="https://www.pfaf.org/user/Plant.aspx?LatinName=Prunus+serotina">https://www.pfaf.org/user/Plant.aspx?LatinName=Prunus serotina</a></li> <li>5. Prunus serotina (black cherry). (n.d.). Retrieved May 15, 2018, from  <a href="https://www.cabi.org/isc/datasheet/44360">https://www.cabi.org/isc/datasheet/44360</a></li> <li>6. Native Plant Network. (n.d.). Retrieved May 16, 2018, from  <a href="https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-prunus-1090&amp;referer=wildflower">https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=rosaceae-prunus-1090&amp;referer=wildflower</a></li> </ol>
Other Sources Consulted	<p>Virginia Tech Dendrology. (n.d.). Retrieved May 15, 2018, from  <a href="http://dendro.cnre.vt.edu/dendrology/syllabus/factsheet.cfm?ID=66">http://dendro.cnre.vt.edu/dendrology/syllabus/factsheet.cfm?ID=66</a></p> <p>Prunus serotina. (n.d.). Retrieved May 16, 2018, from  <a href="https://www.fs.fed.us/database/feis/plants/tree/pruser/all.html">https://www.fs.fed.us/database/feis/plants/tree/pruser/all.html</a></p> <p>Nokes, J. (2001). How to grow native plants of Texas and the Southwest. Austin, TX: University of Texas Press.</p> <p>Correll, D. S., &amp; Johnston, M. C. (1979). Manual of the vascular plants of Texas. Richardson, TX: U. of Texas at Dallas.</p>
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