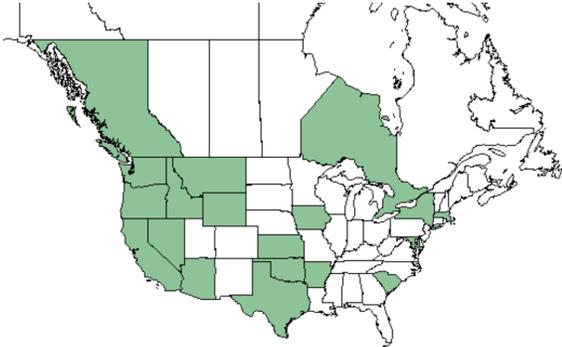


**Plant Propagation Protocol for *Sanguisorba annua*. (Nutt. ex Hook.) Nutt. ex Torr.**  
 ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/SAAN2.pdf>

North American Distribution



Washington Distribution

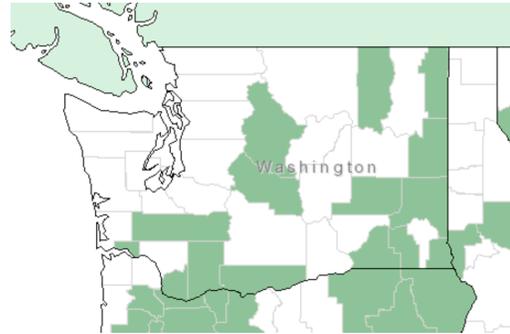


Image Source: USDA PLANTS Database

<b>TAXONOMY</b>	
<b>Plant Family</b>	
Scientific Name	Rosaceae <sup>3</sup>
Common Name	Rose <sup>3</sup>
<b>Species</b>	
Scientific Name	
Scientific Name	<i>Sanguisorba annua</i> . (Nutt. ex Hook.) Nutt. ex Torr. <sup>4</sup>
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	<i>Poteridium annuum</i> <i>Poteridium occidentale</i> <i>Sanguisorba occidentalis</i> <sup>1</sup>
Common Name(s)	Annual Burnet Prairie Burnet Western Burnet <sup>6</sup>
Species Code (as per USDA Plants database)	SAAN2 <sup>2</sup>
<b>GENERAL INFORMATION</b>	
Geographical range	Found scattered throughout the continental United States and Canada.
Ecological distribution	Vernally moist, often compacted soil of grasslands, roadsides, wetlands; valleys. <sup>3</sup>
Climate and elevation range	In the Columbia River Gorge it may be found between the elevations of 600'-3000' between the White Salmon River and Haystack Butte. <sup>1</sup>

Local habitat and abundance	Grassy flats, especially on semi-wasteland or where the soil is moist in spring. Suitable for: light (sandy), medium (loamy) and heavy (clay) soils. Suitable pH: acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. <sup>4</sup>
Plant strategy type / successional stage	
Plant characteristics	<p>Glabrous annual or biennial. Stems erect, often branched, 15–40 cm. Leaflets 7 to 15, oblanceolate, 6–14 mm long, deeply pinnately divided into linear lobes. Flowers perfect; sepals deltoid, 1–3 mm long, green with white or pink margins; stamens 2; pistil 1. Fruit ovoid, 2–3 mm long with unequal wings on the angles.<sup>3</sup></p> <p>The generic name comes from the Latin sanguis, meaning blood, and sorbeo, meaning to staunch, referring to the herb's ability to stop bleeding.<sup>7</sup></p> <p>The young leaves make a good salad plant, tasting somewhat like cucumbers. The leaves can be chopped and blended or mixed with other herbs as a seasoning. The dried flowers and leaves can be prepared as a tea.<sup>7</sup></p>
<b>PROPAGATION DETAILS: <i>S. occidentalis</i></b> Container (plug) Method as Explained by Dave Skinner <sup>5</sup>	
Ecotype	South of Moscow, ID
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	10 cu. in
Time to Grow	4 Years
Target Specifications	Tight root plug in container.
Propagule Collection Instructions	Fruit is an achene enclosed in the dried hypanthium. Seed is collected in early July when the inflorescence is dry and the seeds are grayish-brown in color. Seed can be stripped from the inflorescence or the inflorescence can be clipped from the plant. Seed maturity is fairly uniform. Harvested seed is stored in paper bags at room temperature until cleaned.
Propagule Processing/Propagation Characteristics	The inflorescence is rubbed by hand to free the seed, then cleaned with an air column separator. Larger amounts can probably be threshed with a hammermill, then cleaned with air screen equipment. Clean seed is stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity.
Pre-Planting Propagule Treatments	<p>Extended cold, moist stratification is needed for this ecotype. Chirco &amp; Turnoer (1986) indicate germination will occur in light or dark without pretreatment. Alaskan ecotypes of <i>S. officinalis</i>, <i>S. menziesii</i>, and <i>S. canadensis</i> germinate rapidly w/o pretreatment (Holloway &amp; Matheke 2003), as does the introduced <i>S. minor</i> (Young &amp; Young 1986).</p> <p>However, unpublished data from trials conducted at the Pullman Plant</p>

	<p>Materials Center revealed that no emergence occurred without stratification. 45 days of cold, moist stratification resulted in 10% emergence. 90 days of cold, moist stratification resulted in 33% emergence. Containers sown in November and left outside under cool, fluctuating spring temperatures achieved 97% emergence. Seedlings which germinated in the greenhouse thrived in the constant warmth, so it is likely the longer stratification time and not the cool, fluctuating temperature was the factor in the increased germination.</p> <p>Seeds were covered in all trials. The effects of light on germination were not explored.</p>
Growing Area Preparation / Annual Practices for Perennial Crops	<p>In October seed is sown in 10 cu. in. Ray Leach Super cell containers filled with Sunshine #4 and covered lightly. A thin layer of coarse grit is applied to the top of the planting soil to prevent seeds from floating during watering. Containers are watered deeply and placed outside. Containers are moved to the greenhouse in February.</p> <p>Alternately, seed can be moist stratified in a refrigerator at 35-40 degrees F for 120 days before sowing in the greenhouse.</p>
Establishment Phase Details	Medium is kept moist until germination occurs. Germination usually begins in 4 days and is complete in 8 days.
Length of Establishment Phase	1 week.
Active Growth Phase	Plants are watered deeply every other day and fertilized once per week with a complete, water soluble fertilizer containing micro-nutrients. Plants may require water every day during the final part of the active growth period.
Length of Active Growth Phase	2-3 months.
Hardening Phase	Plants are moved to the cold frame in early to mid April, depending on weather conditions and plant performance. They are watered every other day if the weather is cool, and every day during hot, dry spells.
Length of Hardening Phase	2-4 weeks
Harvesting, Storage and Shipping	
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	
Other Comments	<i>S. occidentalis</i> is very similar to the more easterly <i>S. annua</i> except <i>S. annua</i> has mostly 4 stamens rather than 2, and a much more prominently winged calyx. <i>S. occidentalis</i> is sometimes considered a synonym of <i>S. annua</i> . <sup>5</sup>

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