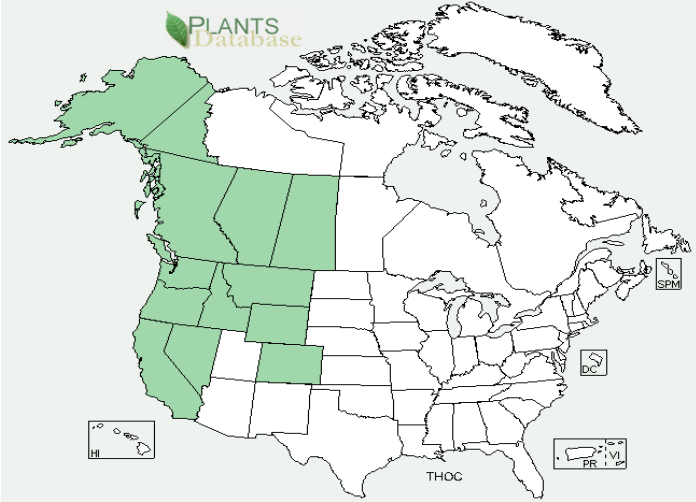
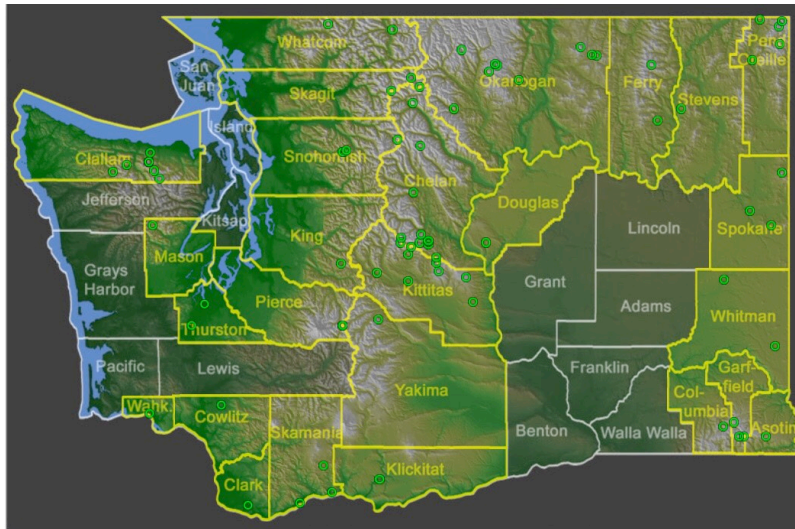


Plant Propagation Protocol for *Thalictrum occidentale* A. Gray

ESRM 412 – Native Plant Production

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

TAXONOMY	
Plant Family	
Scientific Name	Ranunculaceae
Common Name	Buttercup
Species Scientific Name	
Scientific Name	<i>Thalictrum occidentale</i> A. Gray
Varieties	<i>var. macounii</i> <i>var. occidentale</i> <i>var. palousense</i> <i>var. columbianum</i> <i>var. megacarpum</i>
Sub-species	
Cultivar	
Common Synonym(s)	<i>Thalictrum breitungii</i>
Common Name(s)	Western meadow-rue
Species Code (as per USDA Plants database)	THOC
GENERAL INFORMATION	
Geographical range	 <p>(5)</p>



(1)

Ecological distribution	Located in hilly to mountainous terrain. Can be found in shady forest understory to sunny moist meadow. (1)
Climate and elevation range	Low to medium elevation. (7)
Local habitat and abundance	Abundant in subalpine meadows and forest. (12,1). Typically found at elevations of 1600-2000 m. (11)
Plant strategy type / successional stage	Western meadow rue is a mid to late succession plant with a fast to aggressive growth rate that can tolerate seasonal floods (4).
Plant characteristics	A .5 to 1 meter tall perennial forb with cauline, 3-4 ternate leaves with obovate leaflets. The flowers are dioecious, both male and female flowers have greenish white sepals. Males have 15-30 stamen while females have 4-9 simple pistils. These pistils have purplish stigma and styles with a superior ovary. (1, 8)

PROPAGATION DETAILS

Ecotype	Two Medicine, Glacier National Park, MT
Propagation Goal	Plant
Propagation Method	Seed
Product Type	Container Plug (3,6)
Stock Type	172 ml containers
Time to Grow	10 months
Target Specifications	Stock type: container seedling Height: 4-6 true leaves. Root System: Firm plug container (3,6)
Propagule Collection Instructions	Extract from follicles when they become open and dry. (6)
Propagule	Dormancy is morpho-physiological dormancy (3)

Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	Treat with 500 ppm gibbereliic acid for 24 hours then rinse with water. Place seeds in fine mesh bags and cold, moist stratified in moistened peat moss for 90 days at 1 to 2 C (3) Or Cold stratification for 8 weeks at 5 degrees C (8,9)
Growing Area Preparation / Annual Practices for Perennial Crops	Growing medium used 70% 6:1:1 milled sphagnum peat, perlite, and vermiculite and 30% sand with Osmocote controlled release fertilizer. (6)
Establishment Phase Details	Over winter and require partial shading. (6)
Length of Establishment Phase	8 weeks (6,8,10)
Active Growth Phase	Fertilize with 20-10-20 liquid NPK at 100 ppm bi-weekly during the growing season (6) Growing season last from April to October (6).
Length of Active Growth Phase	12 weeks (6)
Hardening Phase	Fertilize with 10-20 liquid NPK in early fall and leach water from containers. (3)
Length of Hardening Phase	4 weeks (6)
Harvesting, Storage and Shipping	Over winter outdoors under foam cover and snow. (6)
Length of Storage	5 months (6)
Guidelines for Outplanting / Performance on Typical Sites	Outplant conditions should be in a location with moist soil and partial shade. (12)
Other Comments	
INFORMATION SOURCES	
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Date Protocol Created or Updated	04/24/18