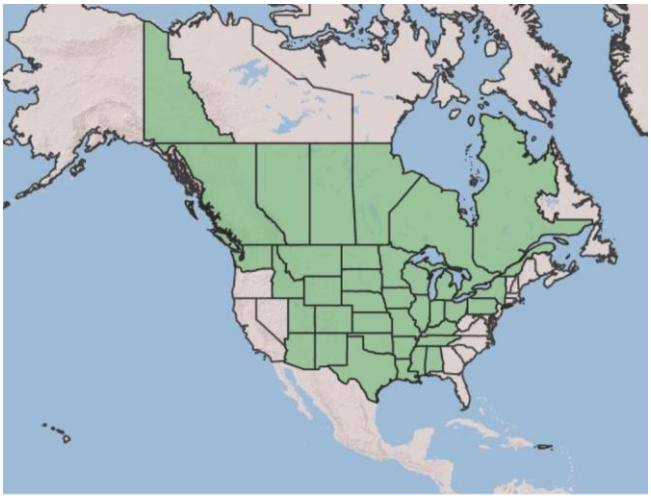
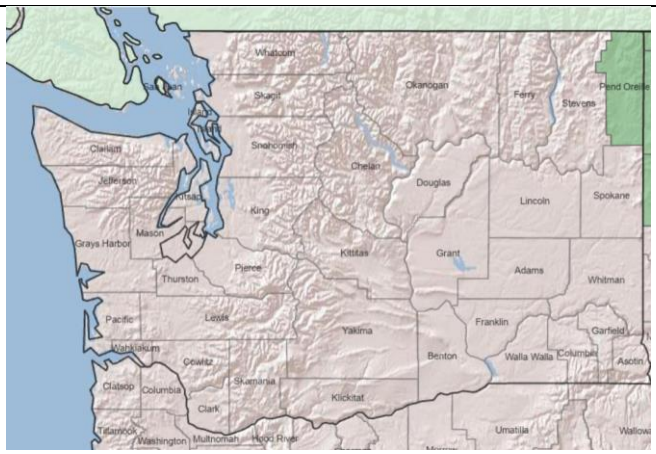
Plant Propagation Protocol for *Thalictrum dasycarpum*
ESRM 412 – Native Plant Production
URL: https://courses.washington.edu/esrm412/protocols/2025/THDA.pdf

TAXONOMY	
Plant Family	
Scientific Name	Ranunculaceae Juss.
Common Name	Buttercup Family
Species Scientific Name	
Scientific Name	*Thalictrum dasycarpum* Fisch. & Avé-Lall.
Varieties	var. *hypoglaucum* (Rydb.) B. Boivin
Sub-species	
Cultivar	
Common Synonym(s)	*Thalictrum dasycarpum* Fisch. & Avé-Lall. var. hypoglaucum (Rydb.) B. Boivin *Thalictrum hypoglaucum* Rydb.
Common Name(s)	Purple meadow-rue
Species Code (as per USDA Plants database)	THDA
GENERAL INFORMATION	
Geographical range	Native Distribution in Ont. to e. B.C., s. to MD, OH, TX & AZ; rare & local in New England, ID, MT & n.e. WA[2] See below map for North America and Washington state distribution  *North America Distribution* [1]

	 *Washington Distribution – County Level* [1]
Ecological distribution	Riparian woods, damp thickets, swamps, wet meadows, stream banks, and prairies[2, 3]
Climate and elevation range	Cool and dry conditions with moderate moisture, well-drained soil in full sun to part shade in rich and highly organic soil and dappled sun in the afternoon.[4] Moist/mesic to wet/saturated conditions.[5] Elevation from 80 - 2500 meters[3]
Local habitat and abundance	Local abundance is present but rare.[6, 7] Glabrous and glandular forms are found throughout the range of the species and occur together in some populations.[3]
Plant strategy type / successional stage	Moderately tolerant to general disturbances and stresses.[5] Recognized as an early successional species in the context of prairie restoration.[8]
Plant characteristics	Herbaceous, upright perennial forb/herb 2-6ft tall. Often divided into numerous, 2-3 lobed leaflets. Flowers are in large open to dense branching clusters (panicles).[9] Mostly dioecious. Male flowers have showy yellow stamens and purplish clusters of pistils on female plants.[5]
PROPAGATION DETAILS: SEED	
Ecotype	Seed is collected by hand from locally native plants within the eastern central Upper Peninsula in the Hiawatha National Forest.[10]
Propagation Goal	Plants[10]
Propagation Method	Seed[10]
Product Type	Container (plug)[10]
Stock Type	Deep flats[10]
Time to Grow	5-8 months[10]
Target Specifications	Mature plants. Flats that are not transplanted in the summer remain in the greenhouse for another season.[10]

Propagule Collection Instructions	Seed is collected by hand from locally native plants within the eastern central Upper Peninsula. Flowers from May to July. The seed is harvested in August and September.[10]
Propagule Processing/Propagule Characteristics	Dry seeds for 1-2 weeks in open paper bags or Rubbermaid-style bins, shaking or turning the seed heads. Seed is not cleaned. Once seeds have dried, begin stratification.[10] Seed density unknown.
Pre-Planting Propagule Treatments	Stratification: mix seeds with an equal amount of moist perlite or vermiculite. Put mixture into a Ziploc-style bag or a Rubbermaid-style container. Seal the container and store for 2 months in a cool dry place (refrigerator or cold garage).[10]
Growing Area Preparation / Annual Practices for Perennial Crops	Sowing Media: Scotts Redi-earth Plug and Seedling Mix. Contains vermiculite, and sphagnum peat moss.[10] Container Type and Size: 24 cell (2"diameter) 14"x8.5"x4" deep flats[10]
Establishment Phase Details	Beginning January, thoroughly moisten the soil with water. Cover the holes in the plug tray cells with newspaper so that the soil does not fall out. Fill cells with damp soil and press soil down with a spoon. Refill the cell plugs with soil to the top, this time not pressing it down. Water the soil in the plug cells again. Sow the seeds by hand at a rate of about 2 seeds in each cell. Cover the seeds with a thin amount of soil. Soil is kept consistently damp during germination.[10]
Length of Establishment Phase	Not directly mentioned, potentially 4-8 weeks
Active Growth Phase	Plant trays are moved to cooler north greenhouse tables. Does not need to be consistently moist. No fertilizers are used. From January until August the greenhouse thermostat is set at 65 degrees F. From Sept. through Dec. the thermostat is set at 55 degrees F.[10]
Length of Active Growth Phase	Not directly mentioned, potentially 2-5 months
Hardening Phase	In early-late spring, mature plants can be moved into a cold frame with a cover of material that diffuses sunlight to prevent scorching of the plants. When danger of frost has passed leave plants outside. Water less frequently.[10]
Length of Hardening Phase	Not directly mentioned, potentially 4-8 weeks
Harvesting, Storage and Shipping	In the Upper Peninsula, flats are transplanted into the field from late May to early October. Flats that are not transplanted in the summer remain in the greenhouse for another season.
Length of Storage	Unknown but seeds can be cold stored until (up to 3 years).

Guidelines for Outplanting / Performance on Typical Sites	Very easy to establish. Surprisingly tolerant of relatively drier conditions in wildflower gardens.[10] Flowers bloom during spring and summer seasons.[4]
Other Comments	Propagation Environment: Greenhouse film is made of Standard U.V. 3HL Clear 6 mil (J.R. Johnson's Greenhouse Supply Inc.) Fans run continuously to circulate the air. Vents open during the summer months to allow for cooling.[10]
INFORMATION SOURCES	
References	See Below
Other Sources Consulted	Marilyn M Park and Dennis Festerling, "Thalictrum Dasycarpum," Thalictrum dasycarpum - FNA, July 30, 2020, accessed May 14, 2025 http://dev.floranorthamerica.org/Thalictrum_dasycarpum. "Thalictrum Dasycarpum," Tennessee Smart Yards, February 10, 2021, https://tnyards.utk.edu/thalictrum-dasycarpum/. "Thalictrum Dasycarpum," Thalictrum dasycarpum - Plant Finder, accessed May 16, 2025, https://www.missouribotanicalgarden.org/PlantFinder.
Protocol Author	Lexi Nakamura
Date Protocol Created or Updated	05/15/2025

References:

[1] "Thalictrum Dasycarpum Fisch. & Avé-Lall. Purple Meadow-Rue," (n.d.) USDA plants database, accessed May 13, 2025, https://plants.usda.gov/plant-profile/THDA.

[2] "Plant Database," Lady Bird Johnson Wildflower Center - The University of Texas at Austin, March 28, 2023, accessed May 13, 2025 https://www.wildflower.org/plants/result.php?id_plant=thda.

[3] "Flora of North America," (n.d.) Thalictrum Dasycarpum in Flora of North America @ efloras.org, accessed May 14, 2025, http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233501264.

[4] "Thalictrum Dasycarpum," (n.d.) Thalictrum dasycarpum (Purple Meadowrue) | North Carolina Extension Gardener Plant Toolbox, accessed May 14, 2025, https://plants.ces.ncsu.edu/plants/thalictrum-dasycarpum/.

[5] "Plants for Stormwater Design Manual Section 4," (n.d.) CiteSeerX, accessed May 14, 2025, https://citeseerx.ist.psu.edu/. Page 318-319

[6] Thalictrum Dasycarpum Abundance Map in North America, Floristic Synthesis of NA, BONAP North American Plant Atlas (BONAP, February 11, 2014), accessed May 14, 2025, https://bonap.net/MapGallery/State/Thalictrum%20dasycarpum.png.

[7] "North American Plant Atlas," 2010 Bonap North American Plant Atlas, February 8, 2024, accessed May 14, 2025, http://www.bonap.org/MapKey.html.

[8]Ryan E. Campbell and Jacques L. Hooymans, "12. Results from Four Decades of Successional Prairie ...," illinois state, 2016, accessed May 15, 2025 https://ir.library.illinoisstate.edu/cgi/viewcontent.cgi?article=1004&context=napc, Page 3.

[9]"Thalictrum Dasycarpum," (n.d.) Thalictrum dasycarpum (Purple Meadowrue) | North Carolina Extension Gardener Plant Toolbox, accessed May 15, 2025, https://plants.ces.ncsu.edu/plants/thalictrum-dasycarpum/.

[10]Jan Schultz, "Native Plant Network — Reforestation, Nurseries and Genetics Resources," (n.d.), Native Plant Network, accessed May 16, 2025, https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=ranunculaceae-thalictrum-2132.