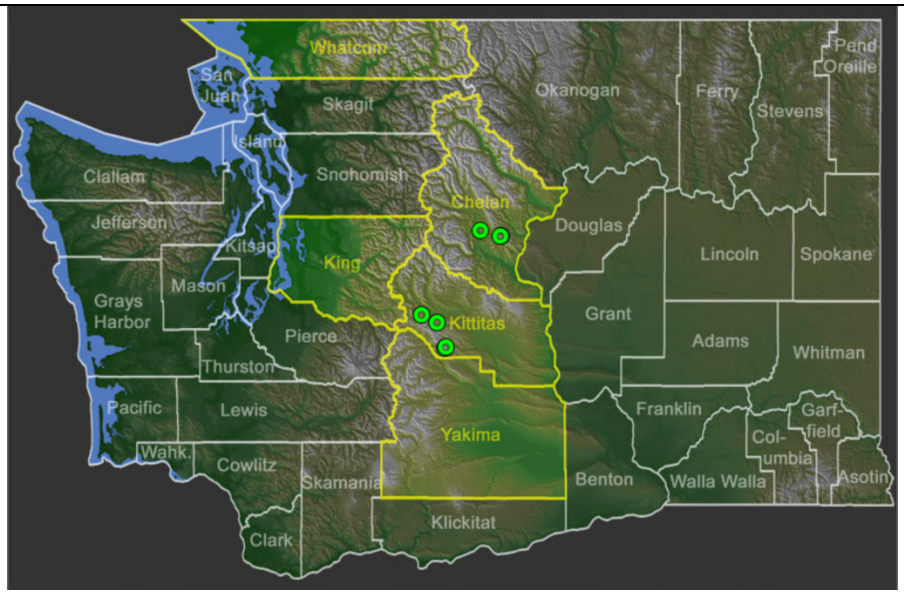
Plant Propagation Protocol for Calamagrostis tweedyi
ESRM 412 – Native Plant Production
URL: https://courses.washington.edu/esrm412/protocols/2025/CATW.pdf

TAXONOMY	
Plant Family	
Scientific Name	Poaceae
Common Name	Grass
Species Scientific Name	
Scientific Name	Calamagrostis tweedyi (Scribn.) Scribn. Ex Vasey
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	Greeneochloa tweedyi [8] Deyeuxia tweedyi [12]
Common Name(s)	Tweedy's reedgrass Cascade reedgrass
Species Code (as per USDA Plants database)	CATW
GENERAL INFORMATION	
Geographical range	 [2]

	 [9]
Ecological distribution	Moist meadows and subalpine slopes. Usually found in coniferous forest edge or understory. [2]
Climate and elevation range	900-2000m [9]
Local habitat and abundance	Found in association with Carex geyeri [9], Abies lasiocarpa, Xerophyllum tenax, Menziesia ferruginea, Luzula hitchcockii, Ribes cereum, small Pinus contorta with more open stands [12].
Plant strategy type / successional stage	Pollinated via wind [2], resistant to human caused disturbance, rhizomatous growth habit, succession following fire on mixed-severity stand replacing fire [5].
Plant characteristics (life form (shrub, grass, forb), longevity, key characteristics, etc.)	Flowers from June-August, perennial. Short rhizomes, culms range from 6-15 dm tall [2].
PROPAGATION DETAILS	
Ecotype	Open Pinus contorta forest
Propagation Goal	Seed
Propagation Method	Seed
Product Type	Container (plug)

Stock Type	10-inch conetainer
Time to Grow	12 weeks
Target Specifications	Root system established firm plug in container.
Propagule Collection Instructions	Seeds are collected by hand. Use shears or hand sythe to collect the seeds from the floret. Collection should occur in mid to late August when florets turn papery and the color is light tan. Seed production is typically higher 2-3 years after a fire has occurred.
Propagule Processing/Propagule Characteristics	Seeds air dried in paper sacks. When drying turn seeds twice a day to prevent mold development and ensure drying. Then remove dried seed from stem using a hammer.
Pre-Planting Propagule Treatments	Seeds are cleaned using an air screen cleaner with 1.55 mm screen and light air. Seeds are stored in cool-dry conditions around 10 degrees Celsius and a relative humidity of 20 to 30 percent in sealed containers. Can be stored for up to 10 years.
Growing Area Preparation / Annual Practices for Perennial Crops	Growing in media mixture with a composition of 70% pear, perlite, and vermiculite mixture and 30% sand with controlled release fertilizer. To sow, use a direct seeding method and top with a light layer of vermiculite.
Establishment Phase Details	Keep media slightly moist during germination. Once seedlings are established let media dry down slightly between irrigations.
Length of Establishment Phase	12-14 days.
Active Growth Phase	Root and shoot are developed. Fertilize plants once per week with 20-20-20 liquid NPK during the growing season.
Length of Active Growth Phase	10-13 weeks.
Hardening Phase	During August and September. Fertilize with 10-20-20 liquid NPK at 200 ppm and gradually reduce irrigation. Ensure to give plants one final watering before winterization.
Length of Hardening Phase	4 weeks.
Harvesting, Storage and Shipping	Takes about 4 months to harvest and the harvest date is 12 weeks to root tightness. The storage conditions for overwinter in an outdoor nursery include insulating foam cover and snow. Water is discontinued 3 days prior to delivery.
Length of Storage	Potentially up to 5 months. Mixed reviews between similar species for storage in nursery to out planting.
Guidelines for Outplanting / Performance on Typical Sites	Hand-planted into moist soil. Percent survival is unknown for this specific species.
Other Comments	Disclaimer: There is limited information available about the specifics of propagation experimentation for the Calamagrostis tweedyi. These protocols are based off protocols for similar species which are Calamagrostis breweri, Calmagrostis canadensis (Michx.), and

	Calamagrostis rubescens. All of which are in the Poaceae family [3] [4] [15]
INFORMATION SOURCES	
References	[1] United States Department of Agriculture. *Catapodium rigidum (L.) C.E. Hubb.* USDA PLANTS Database, Natural Resources Conservation Service, https://plants.usda.gov/plant-profile/CATW. Accessed 7 May 2025. [2] Burke Museum Herbarium. *Calamagrostis tweedyi*. Burke Herbarium Image Collection, https://www.burkeherbarium.org/imagecollection/taxon.php?Taxon=Calamagrostis+tweedyi. Accessed 7 May 2025. [3] *Calamagrostis breweri* cuttings USDA NRCS - Lockeford Plant Materials Center Lockeford, California. In: Native Plant Network. URL: https://NativePlantNetwork.org (accessed 2025/05/06). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources. [4] Tilley, Derek James 2010. Propagation protocol for production of container Calamagrostis canadensis (Michx.) P. Beauv. plants (10 cubic inch conetainer); USDA NRCS - Aberdeen Plant Materials Center, Aberdeen, Idaho. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 7 October 2010). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. [5] Idaho Native Plant Society. *Sage Notes*, vol. 39, no. 3, Dec. 2017, https://idahonativeplants.org/wp-content/uploads/2018/01/SageNotesDecember2017.pdf. Accessed 7 May 2025. [6] *Manual of the Grasses of the United States.* U.S. Department of Agriculture, 1935, Google Books, https://books.google.com/books . Accessed 7 May 2025. [7] *Calamagrostis tweedyi.* Open Herbarium, https://openherbarium.org/taxa/index.php?tid=631044. Accessed 7 May 2025. [8] *Calamagrostis tweedyi. Flora of North America*, https://floranorthamerica.org/Calamagrostis_tweedyi. Accessed 7 May 2025.

	[9] Washington Native Plant Society. *Calamagrostis tweedyi.* Native Plant Directory, https://www.wnps.org/native-plant-directory/890:calamagrostis-tweedyi. Accessed 7 May 2025. [13] Luna, Tara; Hosokawa, Joy. 2008. Propagation protocol for production of Container (plug) *Calamagrostis rubescens* Buckl. plants 172 ml conetainers; USDI NPS - Glacier National Park West Glacier, Montana. In: Native Plant Network. URL: https://NativePlantNetwork.org (accessed 2025/05/07). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.
Other Sources Consulted	[10] *Flora of the Pacific Northwest.* University of Washington Press, 1973, Google Books, Get this book in print▼ Front Cover Threatened, Endangered, and Sensitive Species of the Intermountain RegionAccessed 7 May 2025. [11] Moser, Kevin. *Status and Distribution of Calamagrostis tweedyi in Idaho.* Idaho Department of Fish and Game, 1988, https://idfg.idaho.gov/ifwis/idnhp/cdc_pdf/moser88b.pdf. Accessed 7 May 2025. [12] Gibson, D. J., et al. "Reproductive Challenges of a Rare Grass, *Calamagrostis porteri* subsp. *insperata* (Swallen) C. Greene: Implications for Habitat Restoration." *Reforestation, Nurseries & Genetic Resources*, Summer 2009, https://rngr.net/publications/fnn/2009-summer/new-nursery-literature/reproductive-challenges-of-a-rare-grass/?searchterm=Calamagrostis. Accessed 7 May 2025.
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