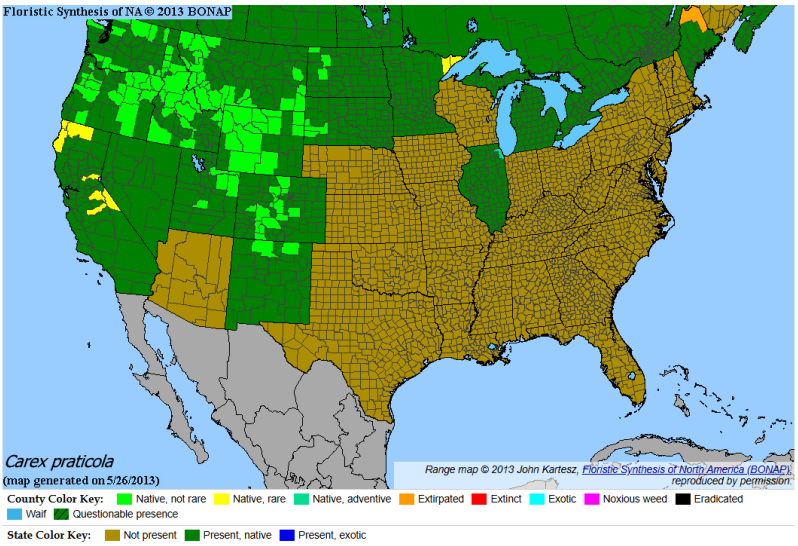
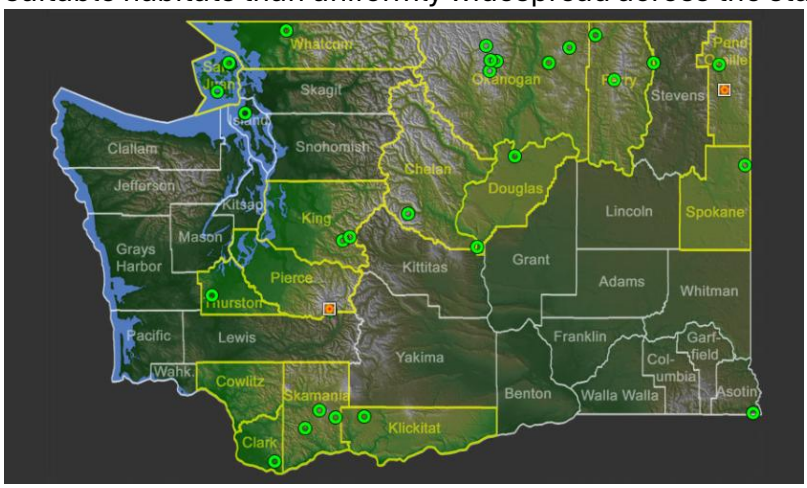
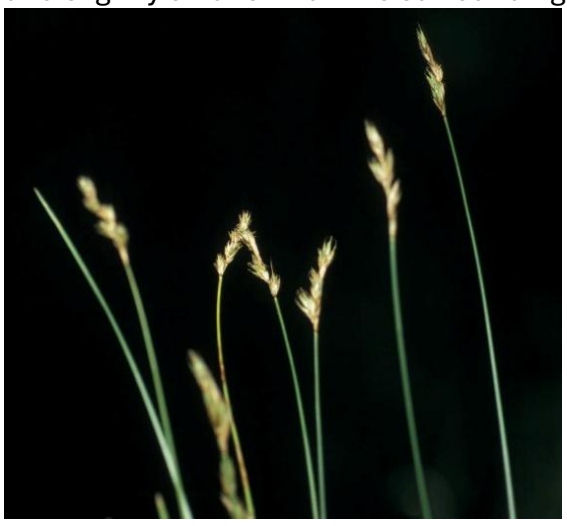
Plant Propagation Protocol for *Carex praticola*
ESRM 412 – Native Plant Production
Spring 2026

2022, Katy Chayka [7]


2022, Tynan Ramm-Granberg [13]

TAXONOMY	
Plant Family	
Scientific Name	Cyperaceae [1]
Common Name	Sedge family [1]
Species Scientific Name	
Scientific Name	Carex praticola Rydb. [1]
Varieties	N/A
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	Carex platylepis Mack. [4] Carex piperi Mack. [4]
Common Name(s)	Broad-scale sedge [4] Northern meadow sedge [4] Meadow sedge [4] Piper's sedge [4]

Species Code (as per USDA Plants database)	CAPR7[1]
GENERAL INFORMATION	
Geographical range	Carex praticola is broadly distributed across western North America, with a strong concentration in the Pacific Northwest, the northern Rockies, and adjacent parts of Canada. The map shows it as largely absent from most of the eastern United States, with only scattered or limited occurrences farther south and east.  North American Distribution map [7] In Washington, Carex praticola is found mainly in the western and north-central parts of the state, with additional occurrences in eastern Washington. Its distribution is broad, but it is more locally common in suitable habitats than uniformly widespread across the state.  Washington Distribution map [15]

Ecological distribution	N/A
Climate and elevation range	Carex praticola grows in mid to low elevations, more specifically, 10-3500 m. [12,13]
Local habitat and abundance	C. praticola occurs in moist to wet meadows, woodlands, plains, and valleys. [2] It also occurs in wetlands or non-wetlands. [5] It is known to grow in disturbed ground, rocky areas, and cliffs. [8,13]
Plant strategy type / successional stage	This species can occur in open and occasionally disturbed habitats; its broad tolerance of moisture and substrate conditions, including rocky sites, may help it persist across a range of successional stages.[14]
Plant characteristics	This perennial, grass-like plant forms dense clumps and produces erect stems that typically grow 20–60 cm tall, reaching up to about 3 feet in height. [3] It has a fibrous root system and alternate, simple leaves that are narrow and linear with parallel veins. Basal leaves are lacking, while the leaves along the stem are slender, only about 1–4 mm wide. The species is monoecious, bearing separate male and female flowers on the same plant, and its flowers are arranged in spike-shaped inflorescences. Each inflorescence contains 3–7 sessile spikes that overlap near the top but become more separated lower down, with the lowest bract remaining inconspicuous. The spikes are small, ovoid, and ascending, measuring approximately 5–12 mm long, with female flowers situated above the male flowers. The perigynia are green to tan, flattened, lance-shaped, and edged with narrow wings, measuring around 3.5–5.5 mm long and tapering gradually into a beak 1.5–2.5 mm in length; the lower portion of the beak is finely serrated while the upper portion is smooth. Female scales are bronze-colored with pale margins and midveins, revealing only the tips of the perigynia. The fruit is classified as either an achene or caryopsis, and the achene is two-sided and slightly smaller than the surrounding perigynium. [2]  2005, Barbara Wilson [14]

PROPAGATION DETAILS: FROM SEED **Protocol is from *Carex pachystachya* due to similarities between species.**	
Ecotype	Our collections were from Mt. Rainier National park at around 4,600 ft elevation near Cayuse Pass, and from Crater Lake National park around 6,000 ft elev. Propagation characteristics very similar for both.[9]
Propagation Goal	Seeds [9]
Propagation Method	Seeds [9]  Carex praticola seeds [7]
Product Type	Propagules (seeds, cuttings, poles, etc) [9]
Stock Type	Seed [9]
Time to Grow	N/A
Target Specifications	Clean seed free of noxious weeds and smut; dehulled seed averages about 1,375,000 / lb. [9]
Propagule Collection Instructions	Seed heads can be clipped or easily hand-stripped when seed is mature, brown, and starting to shatter. Seed heads can be clipped at hard dough to shatter stage also and held loosely in cloth sacks for air-drying out of direct sunlight. [9] Carex praticola is most commonly collected in the months May, June, July, and August. [10]
Propagule Processing/Propagule Characteristics	Hulls are easily removed by running through an oat dehuller. Threshing with a geared-down hammermill and 3/16" screen worked well; followed by a rough scalping with office clipper 1/14" screen, low air - then seed run briefly through a lab-scale oat dehuller and rescreened with office clipper using a 1/20" screen and moderately low air flow. Also, any smutted seeds can be scalped off with the proper screen size. [9]
Pre-Planting Propagule Treatments	Dehulling enhanced germination from 14% (control) up to 84% for dehulled seed which was useful for stand establishment. [9]
Growing Area Preparation / Annual Practices for Perennial Crops	Our best results were achieved by fall-sowing with Carbon-banding. In this method, seed was sown into a finely tilled, firm seed bed with a Hege precision seeder, at 30 " rows, 100 seeds/ ft row; over spraying the seed with an activated charcoal slurry (carbon-banding) followed by a field application of Karmex broad spectrum pre-emergent herbicide at 2.2 lbs ai/ acre (equipment for applying the carbon slurry was provided

	on loan from the Agricultural Research Service (ARS) in Corvallis). The system consists of a tank with mechanical agitator to keep the charcoal in solution, and an impeller pump connected to tubing with large-diameter nozzles directed over the seeding row to deposit the slurry in a 1/8-to-1/4-inch band directly over the seeded row. The system is front mounted on the tractor while seeding equipment is pulled behind. [9]
Establishment Phase Details	Until emergence, some weed control was achieved over the winter with broad spectrum herbicides; once seedling emergence started the following spring weed control was by means of spot-wicking with Round-up and by mechanical hoeing / cultivation between rows. Three applications of Tilt and Bravo fungicides were made at label rates during the late winter / spring of the first and following years to control rusts and other foliage diseases. [9]
Length of Establishment Phase	Over winter; about 6 months at Corvallis [9]
Active Growth Phase	After initially slow growth, crowns develop more rapidly as the soil warms in spring. Little seed is produced during the first year of stand establishment. Seed harvests really begin in the 2nd year; once established, stands remain fairly healthy as long as rusts and fungi are controlled in the spring and weed competition is kept in check. [9]
Length of Active Growth Phase:	March to June at Corvallis [9]
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	Seed ripening was uniform - entire seed heads were clipped in late May / early June when seeds could be easily shaken loose from the heads. Larger plots would lend themselves to mechanical harvest; because of our small plot size the hand-clipped heads were collected in barrels and taken to the poly greenhouse in June and spread out on tarps to dry. Seed shattered easily from the drying seed heads and were collected off the tarps and processed. [9]
Length of Storage	At least 5 years [9]
Guidelines for Outplanting / Performance on Typical Sites	N/A
Other Comments	Seed was plentiful during most collection years at both parks; seedlings were also easily established in “conetainers” for transplant plug production. An informal observational seeding of 2-, 4- , and 5-year-old seed lots from Crater Lake National Park was conducted in the greenhouse in March of 1996. Germination of the 4-and 5-year-old seeds was lower than for the two-year-old seeds – about half the rate of

	the more recent seed lot but still satisfactory for seeding conetainers. Seedlings from the older seed lot were not notably less vigorous or thrifty than those from the 2-year-old seeds. [9]
INFORMATION SOURCES	
Protocol Author	Miriam Wilson
Date Protocol Created or Updated	Created 5/13/26

REFERENCES

1. USDA Plants Database. Accessed May 17, 2026. https://plants.sc.egov.usda.gov/.
2. Northern Meadow Sedge — Carex praticola. Montana Field Guide. Montana Natural Heritage Program. Retrieved on May 17, 2026, from https://FieldGuide.mt.gov/speciesDetail.aspx?elcode=PMCYP03B20
3. "Carex Praticola." Lady Bird Johnson Wildflower Center – The University of Texas at Austin. Accessed May 17, 2026. https://www.wildflower.org/plants/result.php?id_plant=CAPR7.
4. "Carex Praticola." Integrated Taxonomic Information System . Accessed May 17, 2026. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=39770#null.
5. "Carex Praticola – Northern Meadow Sedge." Native Plant Trust: Go Botany, 2026. https://gobotany.nativeplanttrust.org/species/carex/praticola/.
6. Butler, Jennifer; Frieswyk, Christin. 2001. Propagation protocol for production of Propagules (seeds, cuttings, poles, etc.) Carex seeds USDI NPS – Rocky Mountain National Park Estes Park, Colorado. In: Native Plant Network. URL: https://NativePlantNetwork.org (accessed 2026/05/17).
7. "Carex Praticola (Northern Meadow Sedge)." Minnesota Wildflowers, 2026. https://www.minnesotawildflowers.info/grass-sedge-rush/northern-meadow-sedge.
8. "Carex Praticola : Prairie-Dweller Sedge: Rare Species Guide." Minnesota Department of Natural Resources, February 20, 2026. https://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=PMCYP03B20.
9. Flessner, Theresa R; Trindle, Joan D.C.. 2003. Propagation protocol for production of Propagules (seeds, cuttings, poles, etc.) Carex pachystachya Cham. Ex Steud. Seeds seed; USDA NRCS – Corvallis Plant Materials Center Corvallis, Oregon. In: Native Plant Network. URL: https://NativePlantNetwork.org (accessed 2026/05/18)
10. Carex praticola, May 5, 2026. https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=17749.
11. "Plant Guide." NEBRASKA SEDGE Carex nebrascensis Dewey 28 sep 2005 Web.28 Apr 2009. <http://plants.usda.gov/plantguide/pdf/pg_cane2.pdf
12. "Carex Praticola." Carex roanensis in Flora of North America. Accessed May 18, 2026. http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242357433.

13. “Carex Praticola.” Washington Native Plant Society. Accessed May 18, 2026. https://www.wnps.org/native-plant-directory/1010:carex-praticola.
14. “Carex Praticola Rydb.” Oregon Flora. Accessed May 18, 2026. https://oregonflora.org/taxa/index.php?taxon=3774.
15. “Carex Praticola.” Burke Herbarium Image Collection, 2026. https://burkeherbarium.org/imagecollection/taxonmap.php?SourcePage=taxon&Taxon=Carex+praticola.

OTHER SOURCES CONSULTED

“Oregon Flora Species Comparison.” Pacific Northwest Wildflowers. Accessed May 18, 2026. https://nwwildflowers.com/.