

Tillamook Germplasm tufted hairgrass

Deschampsia cespitosa (L.) P. Beauv.

A Conservation Plant Release by USDA NRCS Corvallis Plant Materials Center, Corvallis, Oregon



Tillamook Germplasm tufted hairgrass. Photo by Dale Darris.

Tillamook Germplasm is a selected class pre-variety of tufted hairgrass (*Deschampsia cespitosa*) released in 2002 by the USDA Natural Resources Conservation Service in cooperation with the Oregon Agricultural Experiment Station. It is intended for conservation use in coastal areas of western Oregon and western Washington.

Description

Tillamook Germplasm is a long-lived, medium textured, native perennial bunchgrass. The foliage is mostly basal and the flowering stems (culms) are 3 to 5 ft tall. It is taller and slightly courser compared to other populations evaluated. The culms terminate in a loose, open seedhead (panicle) that is 4 to 10 inches long with nodding lower branches. This selection flowers in early June and produces cross-pollinated seeds that mature by early July.

Source

Tillamook Germplasm (9019731, PVGOR3) originates from seed collected in 1979 from a high coastal marsh along the Miami River (estuary) near Garibaldi in

Tillamook Co., Oregon (123° 53.8' W long., 45° 33.5' N lat., elev. 10 ft). It was not bred or hybridized. However, the population ranked first in plant vigor, clipping response, and stem height and ranked high in foliage abundance and appearance compared to 49 other sources in a common garden study at the Corvallis Plant Materials Center.

Conservation Uses

Suggested uses for Tillamook Germplasm include restoration of slightly brackish and freshwater marshes, streambank stabilization, and wildlife cover and herbage. While in some regions the forage value of the species is considered fair to good for livestock prior to maturity, the palatability and nutritional levels for this selection have not been determined. In western Oregon and western Washington, yields of 2 to 5.5 tons of dry matter per acre were obtained from single annual clippings of fertilized, non-irrigated stands.

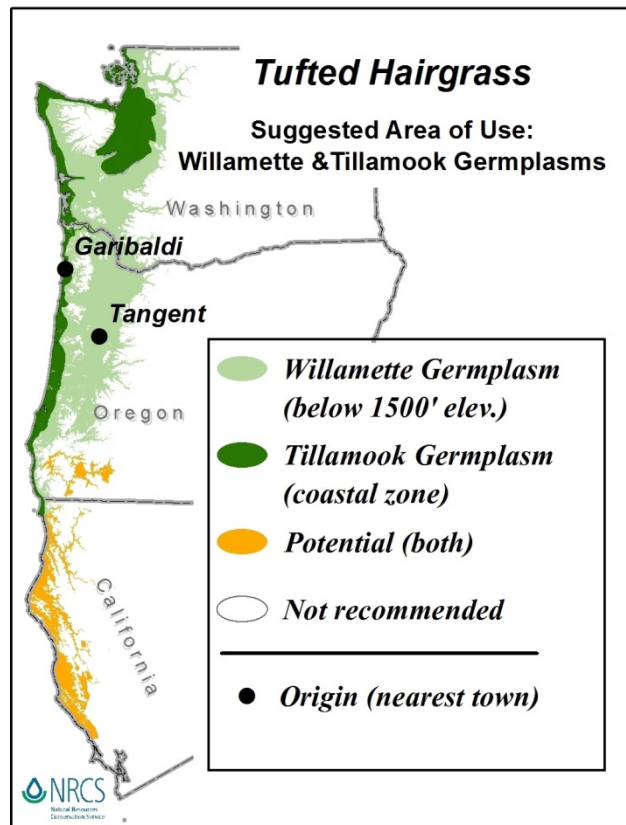
Area of Adaptation and Use

Tillamook Germplasm does best on somewhat well- to poorly-drained, medium- to fine-textured soils that are moderately acid to neutral. Ideal habitat includes seasonally wet prairies, annual floodplains, and high marshes along coastal estuaries in full sun to partial shade. While apparently adapted to fresh and slightly brackish water, higher salinity tolerance compared to inland sources of tufted hairgrass is not fully established. Tillamook Germplasm also grows well on uplands where the rainfall exceeds 35 inches. The suggested area of use is the immediate coastline of Oregon and Washington, as well as the Puget Sound lowlands (see map below). Area of adaptation extends further inland to the western interior valleys of Oregon and Washington where it overlaps with Willamette Germplasm. For more information on this Corvallis PMC release, please see the brochure for Willamette Germplasm.

Establishment and Management for Conservation Plantings

Tillamook Germplasm has little or no seed dormancy. Therefore, planting can occur in the spring or fall without pretreatment of the seed. The suggested drilled seeding rate is 1.5 to 3 lb/acre for most conservation uses. Double the rate if broadcasted. When planted in mixes with forbs and other grasses, sow at a rate of 1/10 to 1/2 lb/acre. At higher rates tufted hairgrass may dominate the stand. There are 1.4 to 1.8 million seeds per pound, so for every pound of seed sown, 30 to 40 seeds are applied per square foot. Because of the small seed size and improved germination with sunlight, plant shallow (1/8 to 1/4 inch deep) or surface sow in combination with a light covering

of mulch or use of a roller/cultipacker. Starter fertilizers are usually not recommended for reclamation or restoration plantings where soils are well developed or substantial weed competition is anticipated. Tillamook Germplasm can be sensitive to high intensity summer fires and close mowing. Guidelines for hay and pasture management have not been determined but should follow general principles for perennial cool season grasses west of the Cascades.



Suggested area of use for Tillamook Germplasm and Willamette Germplasm tufted hairgrasses. Map by Ian Reid..

Ecological Considerations

Tufted hairgrass can be subject to diseases such as ergot, rusts, head smut, blind seed, and leaf spots as well as insects like aphids, billbugs and leafhoppers. Of these pests, leaf rust is most noticeable in some years. The occurrence of other diseases and insects on Tillamook Germplasm was low during the evaluation period. It is not considered to be weedy within the suggested area of use, but seed can remain viable in the soil for several years. There is no reported toxicity to livestock.

Seed and Plant Production

When Tillamook Germplasm tufted hairgrass is grown for seed west of the Cascade Mountains, it is best to fall sow since spring seeding usually requires irrigation. Soils can be well-drained to poorly-drained. Sow at a rate of 1 to 2 pounds per acre. Use of wide row spacings (24 to 36

inches) improves seed yields of this germplasm and allows for optional cultivation for weed control. Pre-emergent herbicides are available for weed control in established stands, but not for new stands. Broadleaf control herbicides can be applied to both new and existing stands. Always read and follow label instructions. Established fields should be fertilized annually at the rate of 100-125 lb N/acre with at least 50 lb of the total amount applied in February. Harvest the seed conventionally by direct combining or windrowing then combining two weeks later. Remove post-harvest residue by baling or flail chopping into a trailing wagon. The remaining stubble should be a height of 3 to 5 inches to avoid damage to elevated crowns of older plants. Awns and hairs should be detached from the seed during processing in order to reduce volume and improve flow through seeding equipment. Seed yields have averaged 70 lb/acre without irrigation.

Availability

For conservation use: Certified (preferred) and non-certified seed of Tillamook Germplasm tufted hairgrass is sometimes available from a limited number of specialized growers and vendors.

For seed or plant increase: G2 or G3 seed of Tillamook Germplasm tufted hairgrass is available to commercial growers from the NRCS Corvallis PMC.

For more information, contact:
 USDA-NRCS Corvallis Plant Materials Center
 3415 NE Granger Ave.
 Corvallis, OR 97330
 Phone: 541-757-4812
 Fax: 541-757-4733
<http://plant-materials.nrcs.usda.gov/orpmc/>

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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