

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
CORVALLIS, OREGON

and

OREGON STATE UNIVERSITY
AGRICULTURAL EXPERIMENT STATION
CORVALLIS, OREGON

NOTICE OF RELEASE OF TILLAMOOK GERMPLASM
TUFTED HAIRGRASS
[SELECTED CLASS OF NATURAL GERMPLASM]

The Natural Resources Conservation Service, U.S. Department of Agriculture and the Oregon State Agricultural Experiment Station announce the release of a selected class ecotype of tufted hairgrass (*Deschampsia cespitosa* [L.] Beauv.) for the coastal Pacific Northwest region.

caespitosa

As a selected release, this plant will be referred to as Tillamook Germplasm tufted hairgrass to document the county in Oregon where it was originally collected. It has been assigned the NRCS accession number 9019731. Tillamook Germplasm is released as a selected class of certified seed (natural track).

This alternative release procedure is justified because existing commercial sources of tufted hairgrass are inadequate. The potential for immediate use in seasonal freshwater wetland and coastal estuarine (brackish high marsh) plantings, as well as streambank and shoreline erosion control, is high. Commercial potential beyond specific conservation uses is probably limited. The cultivar 'Peru Creek' was released by the Colorado PMC for use on mined lands at high elevations in the Rocky Mountains. It is not suitable for conservation use in Oregon and Washington. Likewise, 'Nortran' tufted hairgrass and 'Norcoast' Bering hairgrass, released by the University of Alaska-Fairbanks, were only developed for revegetation, cover, and forage in coastal and inland areas of Alaska. Several horticultural cultivars also exist, but their breeding or selection was based on ornamental traits and not characteristics important for revegetation and conservation use in specific ecoregions.

Origin: Seed of Tillamook Germplasm (9019731) was originally collected in a coastal estuary near Garibaldi, Tillamook County, Oregon. Longitude: 123° 55' West; Latitude: 45° 35' North. Soils: Coquille and Brenner silt loams, poorly drained, tidal flats. Elevation: 0 to 5 foot above mean sea level. Average annual precipitation: 92 inches. Frost-free season: 182 days average. Average January temperature: 42° F. Average July temperature: 59° F. Major Land Resource Area A1.

Description: Tillamook Germplasm is a selection of tufted hairgrass, which is a native perennial bunchgrass. It forms dense tufts on moist soils in wet meadows, open brush, and along streams, rivers, and coastal estuaries. The culms are erect, leafy at the base, three to five feet (90-160 cm) tall. Sheaths are smooth, keeled with prominent veins. The leaf blades are flat or folded, 0.06 to 0.16 inch (1.5-4 mm) wide and 3 to 8 inches (8-20 cm) long. The panicle is loose, usually open, 4 to 10 inches (10-25 cm) long with nodding lower branches. The spikelets are two-flowered, approximately 2 inches long (4-5 cm); the awns are short to twice as long as the spikelet, weakly bent at an angle.

Method of selection: Tillamook Germplasm was chosen for its performance in a common garden study comprised of 49 tufted hairgrass ecotypes (accessions) evaluated at the Corvallis Plant Materials Center from 1980 to 1984. It was further tested in solid swards and other evaluations from 1985 to 1998. There was no intentional breeding, hybridization or within population selection. However, offspring (G1) of the population ranked high in foliage height (9th), foliage width (4th), clipping response (1st), culm or stem height (1st), and vigor (1st) compared to other accessions in the original study. High scores were also achieved for foliage abundance and foliage appearance (fewer insect and disease signs or symptoms). However, there are no special claims for insect or disease resistance. No pests were considered serious during the evaluation period, although leaf rust (*Puccinea* sp.) varied from slight to moderate in some years. Tillamook Germplasm was selected as the best coastal ecotype in the study and for its latitude of origin (central Oregon Coast).

Ecological Impact Assessment: Tillamook Germplasm is a native ecotype of tufted hairgrass originating from an estuary along the Oregon Coast. The species is not known to have any toxic properties, It is not considered to be an invasive plant in its area occurrence.

Anticipated Use: Primary use will be for coastal estuary (intertidal high marsh), streambank, wet meadow, and wetland revegetation. It also provides wildlife habitat, plant diversity, herbage, and erosion control. However, Tillamook Germplasm is not necessarily intended to replace "local" or on-site sources of native tufted hairgrass for ecological restoration plantings. The Natural Resources Conservation Service (NRCS) makes no claims concerning the suitability of these selections in native plant restoration efforts. Individuals with such concerns for a particular environment or ecosystem should make their decisions on a case by case basis.

Area of Adaptation: Anticipated to be best suited to the strongly marine influenced, immediate Northwest Coast and Puget Sound area, from Crescent City, CA, in the south to Port Angeles and Bellingham, WA in the north (<500 ft elev.). This is an area dominated by relatively mild, wet winters with very low heat accumulation in summer. It is roughly equivalent to Sunset Western Garden Book Zone 5 (Brenzel 1995). EPA Ecoregion: Pacific Coast. USDA plant cold hardiness zones 8 and 9. American Horticultural Society (1997) plant heat zones 2 and 3. Growing season 150-300 days. However, 9019731 has performed well in the mid-Willamette Valley suggesting adaptation may overlap with Willamette Germplasm.

Availability of Plant Materials: USDA NRCS, Corvallis PMC, Corvallis Oregon will maintain G2 generation **seed** and plants. A limited quantity of G2 seed may be available to each qualified applicant for G3 and **G4** seed increase upon written request. Seed production will be limited to certified G2 through **G4** seed.

References:

American Horticultural Society. 1997. Plant heat-zone map. Compiled by Meteorological Evaluation Services Co., Inc. AHS, Alexandria, WA. 1 p.

Brenzel, K.N. (editor). 1995. Sunset western garden **book**. Sunset Publishing Corporation. Menlo **Park**, CA. p 19-29.

Franklin, J.F. and C.T. Dyrness. 1988, revised. Natural Vegetation of Oregon and Washington. Oregon State University Press for USDA Forest Service. Corvallis, Oregon.

Hitchcock, C.L. and A. Cronquist. 1976. Flora of the Pacific Northwest. University of Washington Press. Seattle, Washington.

Pojar, J. and A. Mackinnon. 1994. Plants of the Pacific Northwest Coast. Lone Pine Publishing. Redmond, Washington.

Prepared by: Scott M. Lambert, USDA NRCS, Washington State University, **P.O.** 646410, Pullman WA 99164 and Dale C. Darris, USDA **NRCS**, 3415 **NE** Granger Avenue, Corvallis OR 97330.

**Signatures for release of:
Tillamook Germplasm tufted hairgrass (*Deschampsia cespitosa*)**



Robert J. Graham
State Conservationist, Oregon
Natural Resources Conservation Service

Date: 9/19/2001



Raymond L. Huggbanks
State Conservationist, Washington
Natural Resources Conservation Service

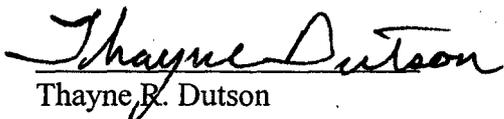
Date: 8/30/02



for

Diane E. Gelburd
Director, Ecological Sciences
Natural Resources Conservation Service

Date: 9/10/02



Thayne R. Dutson
Director, Agricultural Experiment Station
Oregon State University

Date: 8-14-02