Notice of the Naming and Release

of

'PERU CREEK' TUFTED HAIRGRASS
(Deschampsia cespitosa)

BY THE IN GRIN BY TAXONOMY

UNITED STATE DEPARTMENT OF AGRICULTURE - FOREST SERVICE
AND THE
UPPER COLORADO ENVIRONMENTAL PLANT CENTER
AND THE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
AND THE
COLORADO STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION

The above Federal and State agencies announce the cooperative release of 'Peru Creek' tufted hairgrass (Deschampsia cespitosa) for commercial seed and plant production.

Scientific Name Deschampsia cespitosa <Link> Beauv.

Common Name: Tufted hairgrass or alpine tufted hairgrass

Cultivar Name: 'Peru Creek'

Other Identification Numbers: 9024403, EPC 1468, USFS 058

Origin: Seed of the plant was collected in 1978 by Dr. Ray W. Brown at 11,300 feet elevation, southeast exposure, on Peru Creek, Summit County, east of Dillon, Colorado. Tested materials have been collected from two sites, one below the Peruvian Mine and the other below the Pennsylvania Mine adjacent to Peru Creek.

Description and Occurrence: Tufted hairgrass is a perennial, cool season, bunchgrass often found dominating mountain meadows. A.S. Hitchcock, rev. 1951, defines it as found in bogs and wet places from Greenland to Alaska, south to New Jersey, West Virginia, North Carolina, Illinois, North Dakota, New Mexico, and California, Arctic, and temperate regions of the Old World. Eaman, 1974, stated this grass is circumpolar, found on all continents except Africa and Australia.

H.D. Harrington, 1979 identifies the Colorado tufted hairgrass as D. cespitosa ssp. genuina. It is widely distributed over the western mountainous half of Colorado at

'Peru Creek' has many promising attributes as a high elevation revegetation plant species. In comparison with other populations of the species from all over North America and Iceland, it has excellent relative growth and vegetative production on acid mine waste material at high elevations. It appears to produce excellent seed crops virtually every year at high elevations on acidic spoil material. 'Peru Creek' consistently produces relatively high surface cover per plant. This population appears to have relatively exceptional longevity on high elevation disturbances. In comparison with other populations 10 years after seeding on pH 3.2-4.0 mine spoil at the Glengary Mine, 'Peru Creek' is the only one still producing large vegetative tops and viable seed crops.

The Glengary Mine spoils ranged from 2.0 to 6.0 pH. Nothing grew at pH 2.0 but 'Peru Creek' tufted hairgrass established plants at 2.8 pH. At this extreme pH, 'Peru Creek' was stunted and was the only population that had germination and emergence. Ten years later there are still plants in the plots but they have never flowered or grown very much.

On the other sites, ranging from 3.2, 4.0, 5.1, and 6.0 pH 'Peru Creek' was most impressive producing biomass, seed, and having the longest life span. Ten years after seeding, all the plants appear to be alive, and in many cases seedling establishment has occurred next to seeded plants.

'Peru Creek' biomass data show no differences between soil pH ranges from 3.2 and 6.0. Apparently vegetative size and reproductive capacity of 'Peru Creek' are unaffected within this pH range.

Other populations of tufted hairgrass also show growth at fairly low pH, but none have grown to the same size, nor do they produce as much seed, as 'Peru Creek'. All other populations tested show poorer growth at pH 3.2. 'Peru Creek' is more acid tolerant on high elevation mine sites than over 250 North America and Iceland accessions tested by Dr. Brown.

Areas of Adaptation and Uses: 'Peru Creek' tufted hairgrass is recommended for revegetation of high elevation sites having acid (3.5-6.0 pH) soils and should be drilled. It is adapted to wet organic soils where seedling transplants could be used along with broadcast seedings.

The total area of adaptation has not been determined. It appears 'Peru Creek' performs well above 6,000 feet, preferring the range of 9,000 to 12,000, in the Rocky Mountain Region from the Southern Rockies of Colorado and Utah, the Wasatch Range of Utah, and Northern Rockies of Wyoming and Montana.

The Colorado Varietal Release Committee on April 3, 1990, accepted 'Peru Creek' tufted hairgrass for release to commercial growers and users.

Approval Signatures:

_____, Date: 12/6/93
Dr. Charles Laughlin, Director
Colorado Agricultural Experiment Station
Fort Collins, Colorado

_____, Date: 9/22/93
Duane L. Johnson, State Conservationist
USDA Soil Conservation Service
Lakewood, Colorado

_____, Date: 9/30/93
Dr. Ray W. Brown, Project Leader
USDA Forest Service, Intermountain Research Station
Logan, Utah

_____, Date: 10/1/93
, Station Director
USDA Forest Service, Intermountain Research Station
Ogden, Utah

_____, Date: 12-23-93
Scott Robertson, President/Administrative Board
Upper Colorado Environmental Plant Center
Meeker, Colorado

_____, Date: 1-4-94
James Newman, Director
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