

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IDAHO, NEVADA, OREGON, UTAH

and

IDAHO AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF IDAHO
MOSCOW, IDAHO

NOTICE OF RELEASE OF 'RUSH' *INTERMEDIATE WHEATGRASS*.

The United States Department of Agriculture, Soil Conservation Service and the Idaho Agricultural Experiment Station announce the naming and release of 'Rush' intermediate wheatgrass, *Elytrigia intermedia* (Host) Nevski, (synonyms include *Thinopyrum intermedium* (Host) Barkworth & Dewey, *Agropyron intermedium* (Host) Beauv., and *Elymus hispidus* (Opiz) Melderis). Official identification of this material was made by Dr Mary Barkworth, Director, Intermountain Herbarium, Utah State University, Logan, UT.

'Rush' intermediate wheatgrass was developed at the Soil Conservation Service Plant Materials Center, Aberdeen, Idaho through selection and direct increase from field plots. Testing has been conducted at several Western Plant Materials Centers since 1965. 'Rush' has been compared with seven released cultivars of intermediate and pubescent wheatgrasses at sites throughout the Intermountain region and at locations in other western states.

'Rush' intermediate wheatgrass is a selection from a population received as PI 281863, from the German Botanical Garden, Berlin, in 1962, under the identification *Agropyron junceum* (L.) Beauv. 'Rush' was assigned PI 575702 by the Pullman PI station.

'Rush' was selected for its superior seedling emergence, (emerging 3 to 5 days earlier and in greater numbers), seedling vigor, high forage production on sites with average annual precipitation of 12 inches or above, and good drought tolerance.

'Rush' is moderately rhizomatous, and densely tillering, with abundant stems and wide leaves. Foliage varies from moderately blue to green. 'Rush' has a large seed, averaging 66,000 seeds per pound; other intermediate wheatgrass cultivars have counts varying from 'Topar' at 67,000, and 'Luna' at 80,000, to all of the others at 90,000 or above. In seed production fields at the Aberdeen PMC, 'Rush' has produced 336 to 560 Kg/Ha (300 to 500 lb/ac) for each of 4 years, before dropping off.

'Rush' was rated superior or equal in one or more characteristics to 'Greenar', 'Luna', 'Greenleaf', 'Amur', 'Tegmar', 'Oahe', and 'Topar'. Comparisons were made in one or more plots planted at Aberdeen, Idaho, Corvallis, Oregon, and Bridger, Montana, Plant Materials Centers, and many other locations. Trials included comparisons of characteristics which included; emergence, seedling vigor, forage production, stand ratings, and drought tolerance.

'Rush' was superior or equal in all of these factors on sites with annual precipitation of 12" or above. 'Rush' has good drought tolerance, having been rated as equal or superior to Greenar and Oahe in established stands in areas with less than 12" of precipitation. Rush is not recommended for use in areas with less than 12 inches of precipitation.

'Rush' is adapted to the Northwest and Intermountain regions where precipitation averages above 12 inches. It prefers moderately deep, loamy soils, but can grow on sandy and clayey soils. Suitable dryland sites will be found in MLRAs A3, A5, B6, B8-B10, B13, D21, D22, D25, D28a, and E43-E51. Under irrigation, it will grow in all A, B, D, and E regions. The area where it may be adapted extends into the mountains of the Southwest, the western Great Plains, and southern Canadian plains.

Proposed uses include rangeland seeding on the 12 inch to 20 inch precipitation zones for erosion control, forage, and cover. Mine spoil reclamation as part of a mixture or to provide fast, early growth and protection. Critical area stabilization where a fast germinating, rhizomatous perennial is needed as in road stabilization and rehabilitation. Filter strips to trap sediment at field edges or across long sloping fields. Irrigated pasture, to provide feed and cover. Rush will also have application in the cheatgrass and medusahead areas above 12 inch precipitation because of its ability to establish quickly.

Breeder seed will be maintained by the Soil Conservation Service, Plant Materials Center, Aberdeen, Idaho. Foundation seed will become available through the Idaho Crop Improvement Association, Utah Crop Improvement Association, and Soil Conservation Districts in Idaho, Utah and Nevada beginning in 1994. Limited amounts of seed will be available from commercial growers in late 1995. Protection will be applied for under the Plant Variety Protection Act of 1970. Conditions of this license specify that 'Rush' seed can be marketed only as a class of certified seed.

Paul H. Calverley, State Conservationist, Idaho _____ Date _____

William D. Goddard, State Conservationist, Nevada _____ Date _____

Robert J. Graham, State Conservationist, Oregon _____ Date _____

Francis T. Holt, State Conservationist, Utah _____ Date _____

James B. Newman, Head, Ecological Sciences Division _____ Date _____

Gary A. Lee, Director, Idaho Experiment Station _____ Date _____