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Registration of 'Rimrock' Indian Ricegrass

'Rimrock' Indian ricegrass [*Achnatherum hymenoides* (Roem. & Schult.) Barkw.; syn. *Oryzopsis hymenoides* (Roem. & Schult.) Ricker, *Stipa hymenoides* Roem. & Schult.] (Reg. no. CV-192, PI 478833) was released on 29 Jan. 1997. Participating in the release are the USDA-NRCS, Montana Agricultural Experiment Station, Wyoming Agricultural Experiment Station, and the USDA-ARS. Rimrock was tested under the designations M-33, P-15597, T-05424, 9005424, and PI 478833.

Rimrock was collected as seed on 29 June 1960 by Leo K. Pipal from a site 1100 m in elevation (Township 1N, Range 26E, Section 28), approximately 1 km north of Billings, MT . The site overlooks the city and the Yellowstone River Valley. Soil at the collection site is a Worland fine sandy loam (coarse-loamy, mixed, calcareous, mesic Typic Torriorthents) with 2 to 7% slope. Parent material is sandstone. This site is classified by USDA-NRCS as Major Land Resource Area G58A (Northern Rolling High Plains, Northern Part) (1). Estimated average annual precipitation is 250 to 350 mm. The stand was noted as being sparse, but the number of plants sampled was not recorded. No intentional genetic selection has been practiced on the original collection.

Rimrock has been tested at Coffee Point, Curlew National Grassland, Mountain Home, and Orchard, ID; Bridger, Cardwell, Kalispell, Missoula Valley, and Moccasin, MT; Jackpot and Winnemucca, NV; Cache Valley and Grantsville, UT; and Gillette, Greybull, Point of Rocks, and Sheridan, WY. Rimrock's adaptation extends from the northern Great Plains west across the Rocky Mountains to the Columbia Plateau and Snake River Plain and north through the prairies of southern Alberta and Saskatchewan. Rimrock is adapted to sandy soils and is more persistent in medium-textured soils [North Logan, UT; Millville silt loam (coarse-silty, carbonatic mesic Typic Rendolls) with 2 to 4% slope] and heavy-textured soils [Sheridan, WY; Wyarno clay loam (fine, smectitic, mesic Ustollic Haplargids)] than 'Paloma' or 'Nezpar'. Its intended uses are for revegetation, reclamation, and restoration of rangelands; winter forage for livestock and wildlife; and seed production for consumption by wild birds, particularly doves (Columbidae).

Rimrock was released primarily because of its ability to retain mature seed better than Paloma or Nezpar (2,3). Rimrock's superior seed retention is attributed to its more acute angle between the glumes, a morphological trait under genetic control. Glume pair angle of Rimrock florets (44°) was two-thirds that of Paloma glumes (66°) (2). Days from glume opening to shattering were 91% greater for Rimrock than Paloma (6.7 vs. 3.5 d). In contrast to Paloma, many Rimrock florets produced a filled seed without ever opening their glumes. Seed retention index (g seed g^{-1} forage dry wt.) on 15 September was much greater for Rimrock (0.45) than for Nezpar (0.19) or Paloma (0.11).

Rimrock can be distinguished from Paloma by its smaller seed mass and from Nezpar by its more globose (less elongate) seed shape (2,4). Seeds of Rimrock and Paloma are both globose (2). Rimrock and Nezpar seeds are smaller and lighter than those of Paloma (2,4). Indian ricegrass is a predominately self-pollinating species.

Breeder seed of Rimrock will be maintained by the USDA-NRCS Plant Materials Center at Bridger, MT. Seed classes of Rimrock will be breeder, foundation, registered, and certified. Small quantities of Rimrock seed will be provided by the Plant Materials Center upon request. Rimrock will not be submitted for U.S. plant variety protection.

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References and Notes

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