REGISTRATION OF ROUGHRIDER WHEAT
(Reg. No. 589)

J. R. Erickson, L. D. Sibbitt, and J. D. Miller

‘Roughrider’ (Triticum aestivum L. em Thell.), CI 17439, is a hard red winter wheat developed by the Agricultural Experiment Station, North Dakota State University, Fargo, ND, in cooperation with the ARS, USDA. It was selected from the cross ‘Seu Seun’/CI 12500//‘RedChief’/‘Pawnee’/3/‘Cheyenne’/4/‘Hume’/5/‘Yogo’/‘Frootana’//2*‘Minter’ made in 1965 at the Agricultural Experiment Station, South Dakota State University, Brookings, S.Dak., to combine winterhardiness and rust resistance. Roughrider resulted from a single plant selection made in the F3 generation. It has been tested in North Dakota since 1970 under the designation ND 7121.

Roughrider is mid-tall, with white, mid-strong, hollow stems. The spikes are awned, fusiform, lax, and inclined. The glumes are short, narrow, glabrous and white with shoulders narrow and wanting and acuminute beaks. The kernels are red, mid-long, hard and ovate with a mid-sized germ, narrow, mid-deep crease, rounded cheeks, and mid-long brush.

In North Dakota trials from 1973 to 1975, Roughrider out-yielded ‘Froid’ and ‘Winoka’ by 11 and 9%, respectively. Roughrider is equivalent to Froid and superior to Winoka for winterhardiness. Its test weight is about 2 kg/ha heavier than that of Froid and slightly lighter than Winoka. Roughrider heads 2 days earlier and is about 8 cm shorter than Froid. It is similar to Winoka for both traits. It is more lodging resistant than either Froid or Winoka. Roughrider has field resistance to stem rust, (Puccinia graminis f. sp. tritici Eriks. & E. Henn.), and has shown greater resistance to certain stem rust races when inoculated in the seedling and adult stages than either Froid or Winoka. It is susceptible to leaf rust, (Puccinia recondita Rob. ex Desm. f. sp. tritici Eriks). The overall milling and baking quality of Roughrider is satisfactory. It was faulted for high flour ash and slightly inferior crumb texture and color. It is about 1.5 percentage points lower in protein than hard red spring wheats when grown under similar conditions. Roughrider has good water absorption and is satisfactory for other quality characteristics. This cultivar is described further in North Dakota Farm Research.

Roughrider was named and released by the Agricultural Experiment Station, North Dakota State University, Fargo, N. Dak., on 18 Dec. 1975. Breeder seed will be maintained by the Seedstocks Project, Agricultural Experiment Station, North Dakota State University, Fargo, ND 58102. The National Small Grain Variety Review Board has approved Roughrider for certification.

1 Registered by the Crop Sci. Soc. Am. Published with approval of the Director, Agric. Exp. Stn., North Dakota State Univ., Fargo, ND 58102. Accepted 9 May 1977.
2 Associate professor, Agron. Dep. and professor, Cereal Chemistry and Technology Dep., ND State Univ.; and plant pathologist, ARS, USDA, Fargo, ND 58102.

REGISTRATION OF ORBIT WHEATGRASS
(Reg. No. 11)

T. Lawrence

‘Orbit’ tall wheatgrass (Agropyron elongatum Host.) was developed at the Research Station, Agriculture Canada, Swift Current, Sask. It was tested experimentally and in February 1966 was the first cultivar censured for use in Canada.

Orbit is a composite made up of seed from locally selected strains and USDA P.I. 98526 which was from the average of the field is allowed. Awns are variable (5 to 7 cm most frequent) in length but may be reduced further in the lower spikelets or in the beak of the spikelet. For the irregular character of tall, awned types, Hart may contain a maximum of 1.0% of these of 1.0% for the foundation seed, 1.5% for the registered seed class, and 3.0% for the certified class. A tall, awned plant has its spike more than 1 cm above the average head height of the field. This variation not observed in the selection process, such a tolerance may not be uniformly expressed. Further selection of the cultivar, or production in different environments may increase the frequency of such characters within the population.

Compared to ‘Arthur’, Hart has yielded 10% more in Missouri and 15% more in Pennsylvania, had less lodging, slightly higher test weight, and was about 2 days later in maturity. Missouri Hart is more tolerant to glume blotch and is more tolerant to wheat spindle streak than ‘Arthur’.

Soft wheat quality tests indicate that the overall quality of Hart is acceptable when grown in areas where it is adapted.

Breeder seed of Hart will be maintained by the Agricultural Experiment Station, Columbia, MO 65201 and associate professor of plant breeding, University of Nebraska, University Park, PA 16802.

2 Professors, Dep. of Agronomy, Univ. of Missouri, Columbia, MO 65201 and associate professor of plant breeding, University of Nebraska, University Park, PA 16802.

REGISTRATION OF HART WHEAT
(Reg. No. 590)

J. R. Erickson, L. D. Sibbitt, and J. D. Miller

‘Hart’ WHEATGRASS
(Reg. No. 590)

T. Lawrence

‘Hart’ WHEATGRASS
(Reg. No. 590)