REGISTRATION OF LEW WHEAT
(Reg. No. 582)
F. H. McNeal and M. A. Berg

'Lev' wheat (Triticum aestivum L. em. Thell.), CI 17429, is a hard red spring wheat cultivar that is resistant to the wheat stem sawfly (Cephus cinctus Norton). It was developed cooperatively by the Montana Agricultural Experiment Station, the North Dakota Agricultural Experiment Station, and the ARS, USDA. Lew was selected at Minot, N. D. in 1969, from the cross 'Fortuna'/S6285. S6285 is a selection from the cross ND4/Rescue'/11-50-17/S1349, and includes the cultivars 'Thatcher', 'Kenya Farmer 338 Lc', Rescue, 'Chinook', 'Frontana', 'Kenya 58', and 'Newthat'.

The cross from which Lew was selected was made in 1964. An F0 seed bulk was subsequently harvested from an F0 head row at Minot, N. D. in 1969, and this seed was then used for planting in a single row yield nursery at Bozeman, Mont. in 1970. This selection was advanced to the Montana Yield Nursery in 1971 when it was assigned Montana Selection number MT 711. MT 711 was then grown in the Montana Advanced Yield Nursery at six research centers, 1972-1973. It was also included in the International Sawfly Yield Nursery 1972-1975 and the Uniform Regional Hard Red Spring Wheat Nursery 1974-1975.

Lew has a solid stem that provides resistance to the wheat stem sawfly, an insect pest found in wheat producing areas of Montana and North Dakota. The cultivar has white straw and chaff and is midseason in maturity. The spike is awned, fusi-form, middense to lax, and has a tendency to nod at maturity. The awns are white and the glumes are glabrous. KerneIs are red, hard, and midlong; the brush is midred.

Montana data suggest that Lew has a yield and test weight advantage over 'Tioga', a sister selection released in North Dakota and Montana in 1974. Lew is resistant to stripe rust (Puccinia striiformis, West) and leaf rust (Puccinia rubigo-vera (DC.) Wint. f. sp. tritici (Eriks.) Carl.). while Tioga is susceptible to both. Lew is also resistant to stem rust (Puccinia graminis f. sp. tritici Eriks. & E. Henm.). The Montana Cereal Quality Laboratory rates Lew superior to Tioga in both milling and baking quality, and superior to Fortuna in baking quality.

Approximately 21,400 kg (785 bu) of breeder seed was released to Montana certified seed growers in the spring of 1976. Breeder and foundation seed will be maintained by the Plant and Soil Science Department, Montana State University, Bozeman, MT 59715.

REGISTRATION OF NEWANA WHEAT
(Reg. No. 583)
F. H. McNeal and M. A. Berg

'Newana' wheat (Triticum aestivum L. em. Thell.), CI 17430, Montana selection MT 7156, is a hard red spring wheat cultivar developed cooperatively by the Montana Agricultural Experiment Station, the North Dakota Agricultural Experimental Station, the ARS, USDA, and Washington State Agricultural Research Center. Newana was selected from the cross 'Norana'/‘Rescue’/11-50-17/S1349, and includes the cultivars ‘Thatcher’, ‘Kenya Farmer 338 Lc’, Rescue, ‘Chinook’, ‘Frontana’, ‘Kenya 58’, and ‘Newthat’ in its pedigree.

Newana was selected in the F4 generation from the cross CI 14484/CI 17429, is a sister selection released in North Dakota and Montana in 1974. Newana is a single gene semidwarf with white straw and chaff and is midseason to late in maturity. The spike is awned, fusi-form, middense to lax, and similar in appearance to ‘Norana’. Kernels are red, short, hard, and of medium size with a dark red hull. The surface is rougher than that of Norana; the glumes are glabrous. Newana is resistant to leaf rust (Puccinia triticina (Eriks.) Eriks.) and stem rust (Puccinia graminis f. sp. tritici Eriks.) but susceptible to leaf rust (Puccinia rubigo-vera (DC.) Wint., f. sp. tritici (Eriks.) Carl.). The cultivar is resistant to Septoria and other leaf diseases, allowing it to yield well even when infected.

Newana has been more productive than Norana and equal in yield to 'Era'. It has consistently yielded 3.5 kg/ha more than Norana. The cultivar, like many dwarfs, produces best under high moisture conditions. The test weight of Newana has been equal to both Norana and Era, and nearly equal to Fortuna. Yield and test weight advantages of Newana justify its recommendation for commercial production.

The flour yield of Newana, like that of most other cultivars, is less than that of most other spring wheat cultivars recommended for production in Montana. However, the milling characteristics of Newana are superior to those of Fortuna and Era, and nearly equal to those of Norana and Era. and Norana. Kernels are red, short, hard, and of medium size with a dark red hull. The surface is rougher than that of Norana; the glumes are glabrous. Newana is resistant to leaf rust (Puccinia triticina (Eriks.) Eriks.) and stem rust (Puccinia graminis f. sp. tritici Eriks.) but susceptible to leaf rust (Puccinia rubigo-vera (DC.) Wint., f. sp. tritici (Eriks.) Carl.). The cultivar is resistant to Septoria and other leaf diseases, allowing it to yield well even when infected.

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