REGISTRATION OF MANNING WHEAT
(Reg. No. 644)

Wade G. Dewey*

'MANNING,' CI17846, a hard red winter wheat (Triticum aestivum L. em Thell.), was developed by the Utah Agric. Exp. Stn. It originated from the cross 'Delmar'/P178383//'Columbia'/4/Delmar/3/UT175-53/ /Norin' 10//'Brevor.' UT175-53 is a bunt (Tilletia spp.) resistant breeding line derived from the cross 'Hussar'/'Turkey'/'Ridit'//Oro/'Ridit. The final cross in the sequence was made in 1967 and the single F₃ plant that became the cultivar Manning was selected in 1973. During its advanced testing period it was identified at UT89099. Foundation seed was released to seed growers in the fall of 1979.

Manning is medium-short in stature, averaging 12 to 15 cm shorter than 'Hansel' and 'Jeff' and 10 to 12 cm shorter than 'Cache' and 'Bridger' under typical dryland conditions in Utah. It is medium-early in maturity, heading about 5 days earlier than Hansel. Spikes are bronze, awned, oblong to fusiform, middense, and tend to be inclined at maturity. Awns are 5 to 7 cm long and somewhat flared. Glumes are glabrous, midlong, midwide, with generally square shoulders. Beaks are mid-short and acuminate. The kernel is hard, red, elliptical to ovate, glabrous, midlong, midwide, with generally square shoulders. Beaks are mid-short and acuminate. The kernel is hard, red, elliptical to ovate, with a midsize germ, middeep crease, and rounded cheeks. The brush is short to medium and noncollared.

Manning has an excellent yield record in our 1977-1979 intrastate tests as well as in the 1978 and 1979 Western Regional Hard Red Winter Wheat nurseries. In 15 location-year comparisons with the standard cultivars presently being grown in Utah, Manning has averaged 10% above the best-yielding cultivars. Its yield advantage is most evident on our better drylands or under moderate levels of irrigation where lodging is often a problem with the standard tall cultivars.

Manning has about the same high level of resistance to dwarf bunt (caused by Tilletia controversa Kuhn) as Hansel. It derives this resistance primarily from its P178383 and Ridit parentage. It also shows a moderate degree of tolerance to snowmold (caused by a number of Fusarium and Taphula species). From limited observations on its reaction to leaf rust (incited by Puccinia recondita Rob. ex Desm. f. sp. tritici), and to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici Em Marchal), Manning appears to be susceptible to these two diseases.

Milling and baking characteristics of Manning are good and similar to Hansel. It has strong dough mixing properties.

Breeder seed will be maintained by the Utah State Agric. Exp. Stn. at Logan, Utah. Utah State University does not plan to apply for a U.S. Plant Variety Protection certificate.

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'TEEWON SIB,' CI17717, is a semidwarf hard red winter wheat (Triticum aestivum L. em Thell.) developed cooperatively by the Utah Agric. Exp. Stn. and AR-SEA-USDA. It was first distributed to growers in 1971. The cultivar is from the cross 'Triumph 64'/'Teewon Sib,' B. The final cross in the sequence was made in 1967 and the cross 'Wichita'2*/'TAP48,' x-rayed. TAP48 is a alien substitution line derived from the W. J. Sando germplasm collection. Teewon Sib carries the Lr24 gene for leaf rust resistant F4 line from the cross Triumph 36 (OK66CS174) was crossed with Sturdy in 1967. P178383 36 lines selected in the F6 generation from an F₃ cross.

Payne was tested in the Southern Regional Performance Nursery in OK711092A in 1976 and 1977. It was tested in the Southern Regional Performance Nursery during 1974-1977. In 24 tests during this 4-year period, Payne, 'TAM W-101,' 'Danne,' and 'Caprock,' averaged 3074, 2858, and 2717 kg/ha. Payne has narrow leaves and a middeep crease, and is similar to Sturdy in height and lodging resistance. It is medium early in maturity, averaging 2 days later than Triumph 64; however, it is somewhat variable for environments it may head as much as 5 days later than Triumph 64. Payne has narrow leaves and a middeep crease, and is resistant to a broad spectrum of leaf rust biotypes (incited by Puccinia recondita Rob. ex Desm. f. sp. tritici Erik.). It is resistant to wheat brown mosaic virus.

Payne has good milling and baking properties between Triumph 64 and Sturdy in overall characteristics.

Breeder seed of Payne will be maintained by the Oklahoma Agric. Exp. Stn. Foundation seed will be available from Foundation Seed Stocks, Inc., Agronomy Dep., Oklahoma State Univ., Stillwater, OK 74078.

1 Registered with the Crop Sci. Soc. of Am. Approved for publication as Utah Agric. Exp. Stn. Journal Series Article No. 2623. Accepted 6 Apr. 1981.
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