REGISTRATION OF SENTINEL WHEAT
(Reg. No. 575)
J. W. Schmidt, V. A. Johnson, P. J. Mattern, A. F. Dreier, and D. V. McVey

'Sentinel' wheat (Triticum aestivum L. em Thell.), CI 17265, is a hard red winter wheat selected in the F2 generation from the cross 'Scout'/4/'Kenya 58'/Newthatch'/2/'Cheyenne'/Tenmarq'/’Mediterranean'/'Hope'/3/'Pawnee'/Cheyenne made in 1962 at the Nebraska Agric. Exp. Stn. 'Homestead' also was selected from this cross. Sentinel was developed cooperatively by the Nebraska Agric. Exp. Stn. and ARS-USDA and tested in the Southern Regional Performance Nursery as Nebraska Selection 68:440.

Sentinel is an early-maturing winter wheat. It has medium short, moderately strong straw. The spike is white, awned, tapering, erect and midsized. Glumes are glabrous, white, short, and narrow, with shoulders narrow and square to oblique, and beaks midshort and acuminate. Awns are 5 to 9 cm long. The kernels of Sentinel are red, hard, short to midlong, ovate to elliptical; germ midsized; crease shallow; cheeks rounded; brush medium and not collared.

Sentinel is less winterhardy than 'Scout 66' and lacks the general adaptation of the latter variety. It is superior to Scout 66 in straw strength and stem-rust (Puccinia graminis Pers. f. sp. triticici Eriks. & E. Henn.) resistance. It is moderately susceptible to soil-borne mosaic virus (Marmor tritici Holmes var. typicum McK.) and susceptible to leaf rust (P. rubigo-vera (De.) Wint. f. sp. tritici (Eriks.) Carl.) wheat streak mosaic virus (M. virgatum McK. var. typicum McK.) and Hessian fly [Mayetiola destructor (Say)]. Sentinel has good milling and baking characteristics: above-average grain protein content, good loaf volume, medium dough-mixing time, and good mixing tolerance.

Sentinel was named and released in 1973. The Nebraska Agric. Exp. Stn. has designated the Sentinel seed classes as breeder, foundation, registered, and certified, and will maintain breeder seed. Sentinel is protected (Certificate No. 7400109) under the U.S. Plant Variety Protection Act, Public Law 91-577, by the Nebraska Agric. Exp. Stn. and may be sold only as a class of certified seed.

1 Registered by the Crop Sci. Soc. Am. Cooperative investigations of the Nebraska Agric. Exp. Stn. and ARS-USDA and supported in part by a grant from the Division of Wheat Development, Utilization and Marketing, Nebraska Dep. of Agric. Approved for publication by the director of the Nebraska Agric. Exp. Stn. as Journal Series Article No. 3997. Accepted 30 June 1976.

REGISTRATION OF TAM W-103 WHEAT
(Reg. No. 577)
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'TAM W-103' hard red winter wheat (Triticum aestivum L. em Thell.), CI 17386, was released by the Nebraska Agric. Exp. Stn. in 1973. TAM W-103 was selected from the cross 'Nebraska 60'/’Mediterranean'/'Hope'/4/'Prairie Marjorie'/15/’TAM W-101' at Nebraska Agric. Exp. Stn. A Texas Agric. Experiment Station plant from this cross, CI 13855, was crossed to Parker in 1959 at the Southern Great Plains Research Center, St. Paul, Minn., as Paper No. 9195. TAM W-103 was one of 40 F2 head selections increased and observed in single rows in 1965. TAM W-103 was selected from this cross, CI 13855, was crossed to Parker in 1959 at the Southern Great Plains Research Center, St. Paul, Minn., as Paper No. 9195. TAM W-103 was one of 40 F2 head selections increased and observed in single rows in 1965. TAM W-103 was subsequently evaluated in intrastate trials.

TAM W-103 has more prostrate juvenile leaves than 'Sturdy' or 'TAM W-101'. It tillers profusely, similar to Parker and 'Centurk,' and culms curve outward slightly near the crown. It heads 2 to 4 days earlier than Sturdy. Days-to-head is the same as that of 'Pronto'. Spikes are red, hard, and somewhat smaller than those of Sturdy. TAM W-103 is susceptible to leaf rust (Puccinia graminis Pers. f. sp. triticici Eriks. & E. Henn.) stem rust (P. graminis Pers. E. Henn.), and mildew, (Erysiphe graminis Marchal), but in most years it is sufficient for the disease levels. TAM W-103 has lower grain protein than Sturdy, but is higher in flour protein. TAM W-103 is lower than Sturdy in bake absorption, and wheat flour protein content. TAM W-103 is significantly higher in loaf volume, but is lower than Chris in these quality traits.