REGISTRATION OF SENTINEL WHEAT
(Reg. No. 575)

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'SENTINEL' wheat (Triticum aestivum L. em Thell.), CI 17265, is a hard red winter wheat selected in the F4 generation from the cross 'Scout'4/‘Kenya 58’/‘Newthatch’2/‘Cheyenne’/‘Tam-marq’/‘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 middense. 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 middling, ovate to elliptical; germ mid-sized; 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 65 in strain strength and stem-rust (Puccinia graminis Pers. f. sp. tritici Eriks. & E. Henn.) resistance. It is moderately susceptible to soil-borne mosaic virus (Makor tritici Holmes (H. typicum Mck)) and susceptible to leaf rust (P. rubigo-vera (De.) Wint. f. sp. tritici (Eriks.) Carl) wheat streak mosaic virus (M. verticatum 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.

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REGISTRATION OF KITT WHEAT
(Reg. No. 576)

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'KITT,' (Triticum aestivum L. em Thell.), CI 17297, a semi-dwarf hard red spring wheat, was developed, named, and released jointly by the Minnesota Agric. Exp. Stn. and ARS-USDA in 1975. Kitt has been tested in Minnesota yield trials since 1969 as MNI-64-33, and it was entered in the USDA Uniform Regional Hard Red Spring Wheat Nursery in 1972.


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Kitt was selected from the cross 'Thatcher'2/‘Supreza’3/‘Frontana’4/‘Kenya 58’/‘Newthatch’2/‘Pembina’/‘Frontana’5/‘Thatcher’6/‘Milda’/‘Kenya 117A’/‘Thatcher’5/‘Frontana’4/‘III-58-4-5/‘Kenya 58’/‘Newthatch’3/‘Lec’. The semidwarf character was introduced through a selection obtained from Montana and labelled H8-58-4 at the Montana station.

Kitt is a yellow chaffed, midseason cultivar with good lodging and resistance. The spike is awned, fusiform, and middense. Kernels are red, hard, and short to medium in length. It is resistant to the predominant races of stem rust (P. graminis f. sp. tritici Eriks. & E. Henn.) and to most other virulent isolates found in low frequency in the recent stem rust surveys. This cultivar has a broader spectrum of resistance to leaf rust (P. rubigo-vera (De.) Wint. f. sp. tritici (Eriks.) Carl) than do 'Christ' and 'Era'. It is also tolerant of black chaff and ergot (Claviceps purpurea (Fr.) Tul.). The hectoliter weight for Kitt is lower than that of 'Pork', 'Chia', 'Era', and 'Waldron', but is similar to that of 'Bounty 208', 'Manitou,' and 'Selkirk'. Kitt produces 15 to 30% more grain than the cultivars Chris, Waldron, 'Justin', and Selkirk. Regional and Minnesota performance trials show that under favorable environmental conditions Kitt and Era are similar in yield in Minnesota, South Dakota, and North Dakota. However, under conditions of moisture stress, Era has yielded 1 to 5% more grain than Kitt.

Milling performance, mixing characteristics, and general breadmaking quality of Kitt are satisfactory. Kitt is significantly higher than Era in grain and flour protein, bake absorption, and loaf volume, but is lower than Chris in these quality traits under conditions of high grain yield.

Breeder seed will be maintained by the Minnesota Agric. Exp. Stn.

REGISTRATION OF TAM W-103 WHEAT
(Reg. No. 577)

K. B. Porter, K. A. Lahr, and E. C. Gilmore

'TAM W-103' hard red winter wheat (Triticum aestivum L. em Thell.), CI 17335, was released by the Texas Agric. Exp. Stn. in 1973. TAM W-103 was selected from the cross 'Norin 10'/‘Scout’4/‘Kenya 58’/‘Newthatch’2/‘Cheyenne’ made in 1962 at the Southern Regional Performance Nursery as Nebraska Selection 68-440. TAM W-103 was one of 40 F2 head selections increased and observed in single rows in 1965. TAM W-103, selection Tx65A1286, was subsequently evaluated in intrastate and regional trials.

TAM W-103 has more prostrate juvenile growth and narrower leaves than 'Sturdy' or TAM W-101. It tillers profusely, similar to Parker and Centurk, and culms curve outward slightly near their crown. It heads 2 to 3 days earlier than TAM W-101 and has a broader spectrum of resistance to leaf rust (P. rubigo-vera (De.) Wint. f. sp. tritici (Eriks.) Carl), stem rust (P. graminis Pers. f. sp. tritici Eriks. & E. Henn.), and mildew (Erysiphe graminis De. f. sp. tritici Eriks.). TAM W-103 has similar in yield in Minnesota, South Dakota, and North Dakota. However, under conditions of moisture stress, Era has yielded 1 to 5% more grain than Kitt.

Milling performance, mixing characteristics, and general breadmaking quality of Kitt are satisfactory. Kitt is significantly higher than Era in grain and flour protein, bake absorption, and loaf volume, but is lower than Chris in these quality traits under conditions of high grain yield.

Breeder seed will be maintained by the Minnesota Agric. Exp. Stn.