

Registration of KS96WGRC37 Powdery Mildew-Resistant Hard White Winter Wheat Germplasm

KS96WGRC37 (Reg. no. GP-556, PI 604222) is a powdery mildew-resistant hard white winter wheat (*Triticum aestivum* L.) germplasm developed cooperatively by the USDA-ARS, the Kansas Agricultural Experiment Station, and the Wheat Genetics Resource Center. It was released as a germplasm in August 1996.

KS96WGRC37 is an F₃-derived line with the pedigree 'Arlin' *3/TA 895. Arlin is a hard white winter wheat cultivar, and TA 895 is a powdery mildew-resistant accession of *Triticum timopheevii* (Zhuk.) Zhuk. subsp. *armeniicum* (Jakubz.) van Slageren (syn. subsp. *araraticum*) from northern Iraq. Seedlings of KS96WGRC37 exhibited a low to intermediate infection type (≤ 4 on a scale of 0 to 9) when inoculated with Isolate 8 of *Erysiphe graminis* DC. f. sp. *tritici* Ém. Marchal [syn. *Blumeria graminis* (DC.) E.O. Speer f. sp. *tritici*], the causal agent of powdery mildew. Isolate 8 elicits a high infection type on the gene *Pm6*, which was transferred previously from *T. timopheevii* subsp. *timopheevii*. Detached leaves of Arlin and KS96WGRC37 were inoculated with 37 diverse isolates of *E. graminis* f. sp. *tritici*. Arlin had a low infection type (0) with one isolate, an intermediate infection type (4) with one isolate, and a high infection type (7–9) with the remaining 35 isolates. KS96WGRC37 had a low infection type (0–3) with nine, an intermediate infection type (4–6) with 25, and a high infection type (7–9) with three isolates (1). KS96WGRC37 was tested as

experimental line U2659-2-9-M2. It is similar to Arlin in height, days to heading, kernel color, and overall phenotype.

Small quantities (2 g) of seed of KS96WGRC37 are available upon written request. Appropriate recognition of source should be given when this germplasm contributes to research or development of a new breeding line or cultivar. Seed stocks are maintained by the Wheat Genetics Resource Center, Dep. of Plant Pathology, Throckmorton Plant Sciences Center, Kansas State University, Manhattan, KS 66506. Genetic material of this release will be deposited in the National Plant Germplasm System where it will be available for research purposes.

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References and Notes

1. Brown-Guedira, G.L., B.S. Gill, T.S. Cox, and S. Leath. 1997. Transfer of disease resistance genes from *Triticum araraticum* to common wheat. *Plant Breed.* 116:105–112.
2. G.L. Brown-Guedira, USDA-ARS and Dep. of Agronomy, and R.G. Sears, Dep. of Agronomy, Kansas State Univ., Manhattan, KS 66506-5501; T.S. Cox, ICRISAT, Patancheru PO, AP 502 324, India (formerly USDA-ARS and KSU); B.S. Gill, Dep. of Plant Pathology, Kansas State Univ., Manhattan, KS 66506-5502; and S. Leath, USDA-ARS and Dep. of Plant Pathology, North Carolina State University, Raleigh, NC, 27695-7629. Cooperative investigations of the USDA-ARS and the Kansas Agric. Exp. Stn., Contribution no. 98-397-J, Kansas Agric. Exp. Stn., Kansas State Univ., Manhattan, KS 66506-4008. Registration by CSSA. Accepted 31 Oct. 1998. *Corresponding author (gbg@ksu.edu).

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