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Registration of KS96WGRC34 Leaf Rust-Resistant Hard Red Winter Wheat Germplasm

KS96WGRC34 (Reg. no. GP-553, PI 604219) is a leaf rust-resistant hard red 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.

Seedlings of KS96WGRC34 exhibited a low infection type (;C to ;2C) when inoculated with seven races of leaf rust (*Puccinia recondita* Roberge ex Desmaz.), KDB-10, MGM-10, MCD-10, TBG-10, MBR-10, PNM-10,18, PNM-10, and MCR-10 (1,2). Seedlings of KS96WGRC34 exhibited a 3− infection type when inoculated with race TFG-10 (2). Adult plants displayed low infection types under moderate to heavy leaf rust infections at Manhattan and Hutchinson, KS, in the years 1992 to 1996, but had a high infection type when tested under heavy inoculum levels at Beeville, TX, in 1995 (2). Seedlings and adult plants of the wheat parents 'TAM 107' and 'Wrangler' exhibited high infection types in all cases.

KS96WGRC34 is an F_3–derived line with the pedigree TAM 107/TA 749//Wrangler. TA 749 is a leaf rust-resistant accession of *Triticum monococcum* L. subsp. *aegilopoides* (Link) Thell (syn. subsp. *boeoticum*). Leaf rust resistance in KS96WGRC34 is conditioned by a single, dominant gene from TA 749. The gene is located on chromosome 5A and segregates independently of all other known genes transferred from *T. monococcum* to hexaploid wheat (3). KS96WGRC34 is similar to Wrangler in height, days to heading, and overall phenotype but has the T1AL·1RS translocation carried by TAM 107.

Small quantities (2 g) of seed of KS96WGRC34 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 66506-5502.

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References and Notes

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4. T.S. Cox, ICRISAT, Patancheru PO, AP 502 324, India (formerly USDA-ARS and KSU); R.G. Sears, Dep. of Agronomy, and G.L. Brown-Guedira, USDA-ARS and Dep. of Agronomy, Kansas State Univ., Manhattan, KS 66506-5501; B.S. Gill, T. Hussien, and R.L. Bowden, Dep. of Plant Pathology, Kansas State Univ., Manhattan, KS 66506-5502. Cooperative investigations of the USDA-ARS and the Kansas Agric. Exp. Stn.. Contribution no. 98-395-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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