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REGISTRATION OF KS85WGRC01 HESSIAN FLY-RESISTANT HARD RED WINTER WHEAT GERMPLASM

KS85WGRC01 (Reg. no. GP-278), PI499691, a Hessian fly-resistant, hard red winter wheat (*Triticum aestivum* L.) germplasm was developed cooperatively by the Kansas Agricultural Experiment Station, the USDA-ARS, and the Wheat Genetics Resource Center (WGRC), Kansas State University. It was released as germplasm in 1985.

KS85WGRC01 is homozygous for resistance to Hessian fly [*Mayetiola destructor* (Say)]. The resistance, conditioned by a single dominant gene, is derived from an *Aegilops squarrosa* (*T. tauschii*) accession, TA1644, collected in Iran. The gene is independent of *H13*, the only other named Hessian fly-resistance gene known to be in the D-genome, and is effective against the known biotypes of the Hessian fly (1).

KS85WGRC01 is a bulk of seven F_5-derived F_7 lines from the cross TA1644/'Newton'//'Wichita'. The cross TA1644/Newton was made using an embryo rescue technique, and the self-sterile F_1 plants were crossed with Wichita. A plant from the final cross had a chromosome number of $2n=49$ and was fertile. Resulting F_2 plants were screened using biotype D of Hessian fly, and four resistant plants (83-571, 83-573, 83-575, and 83-577) were selfed. Wheat-like, highly fertile progenies carrying 42 chromosomes were advanced. Seven F_5-derived F_6 families were homozygous resistant to biotype D. Selfed seed from these seven lines was bulked to form KS85WGRC01.

Based on replicated field evaluation of sibling lines, KS85WGRC01 is heterogeneous for characters other than Hessian fly resistance. It has averaged the same or slightly earlier maturity than Newton, and is 10-cm taller. It is heterogeneous for soilborne mosaic virus resistance, and has a reaction to leaf diseases similar to that of Newton. It is cytogenetically stable.

Small quantities of seed of KS85WGRC01 are available upon written request. It is requested that appropriate recognition of the source be given when this germplasm contributes to research or development of new cultivars. Seed stocks are maintained by the Wheat Genetics Resource Center, Department of Plant Pathology, Throckmorton Hall, Kansas State University, Manhattan, KS 66506.

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References and Notes

1. Hatchett, J.H., and B.S. Gill. 1983. Expression and genetics of resistance to Hessian fly in *Triticum tauschii* (Coss) Schmal. p. 807-811. *In* S. Sakamoto (ed.) Proc. 6th Int. Wheat Genet. Symp., Kyoto, Japan, 28 Nov.-3 Dec. Plant Germ-Plasm Institute, Kyoto University. Kyoto, Japan.

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