

Small quantities (3 grams) of seed of KS12WGGRC56 are available upon written request. We request that the appropriate source be given when this germ plasm contributes to research or development of new cultivars. Seed stocks are maintained by the Wheat Genetic and Genomic Resources Center, Throckmorton Plant Sciences Center, Kansas State University, Manhattan, KS 66506.

### ***Noatice of release of KS12WGGRC57 (TA5617) stem rust-resistant wheat germ plasm.***

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The Agricultural Research Service, U.S. Department of Agriculture and the Kansas Agricultural Experiment Station announce the release of KS12WGGRC57 hard red winter wheat germ plasm with the stem rust resistance gene *Sr52* for breeding and experimental purposes. KS12WGGRC57 is derived from the cross 'TA3060/TA7682 F<sub>3</sub>', where TA3060 is a Chinese Spring wheat stock monosomic for chromosome 6D (CSM6D) and TA7682 is a Chinese Spring-*Dasypyrum villosum* disomic chromosome addition line for the *D. villosum* chromosome 6V#3 (DA6V#3). KS12WGGRC57 has the long arm 6V3#L derived from *D. villosum* translocated to the short arm of wheat chromosome 6AS in the form of a Robertsonian T6AS·6V#3L translocation. The 6V3#L arm in T6AS·6V#3L has a gene conferring resistance to stem rust (*Puccinia graminis* f. sp. *tritici* Eriks. & E. Henn.) (races RKQQC and TTKSK) designated as *Sr52*. *Sr52* is temperature-sensitive and is most effective at 16°C, partially effective at 24°C, and ineffective at 28°C. The T6AS·6V#3L stock is a new source of resistance to Ug99, is cytogenetically stable, and may be useful in wheat improvement.

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### ***Notice of release of KS12WGGRC58 (TA5630, TA5625, TA5643) stem rust-resistant wheat germ plasm.***

B. Friebe, W. Liu (Laboratory of Cell and Chromosome Engineering, College of Life Sciences, Henan Agricultural University, Zhengzhou, Henan 450002, PR China), D.L. Wilson, W.J. Raupp, M.O. Pumphrey (Department of Crop and Soil Sciences, Washington State University, Pullman, WA 99164-6420, USA), J. Poland and R.L. Bowden (USDA-ARS Hard Winter Wheat Genetic Research Unit), A.K. Fritz (Department of Agronomy), and B.S. Gill.

The Agricultural Research Service, U.S. Department of Agriculture and the Kansas Agricultural Experiment Station announce the release of KS12WGGRC58 wheat germ plasm with resistance to stem rust *Sr53* for breeding and experimental purposes. KS12WGGRC58 has a segment of the long arm 5M<sup>e</sup>L derived from *Ae. geniculata* in the form of an interstitial translocation Ti5DS·5DL-5M<sup>e</sup>L-5DL (KS12WGGRC58-Ti, TA5630) and terminal translocations T5DL-5MgL·5M<sup>e</sup>S (KS12WGGRC58-T1, TA5625) and T5DL-5MgL·5M<sup>e</sup>S (KS12WGGRC58-T2, TA5643). KS12WGGRC58-Ti is derived from the cross 'TA5599/Lakin F<sub>3</sub>', where TA5599 is a wheat-*Ae. geniculata* terminal translocation stock consisting of part of the long arm of wheat chromosome 5D, part of the long arm of the *Ae. geniculata* chromosome arm 5M<sup>e</sup>L, and the complete short arm 5M<sup>e</sup>S, and Lakin is a Kansas hard red winter wheat cultivar. KS12WGGRC58-T1 and KS12WGGRC58-T2 are derived from the cross 'TA5599/TA3808 F<sub>3</sub>', where TA3809 is the Chinese Spring stock homozygous for the homoeologous pairing mutant allele *ph1b*, with 5M<sup>e</sup>L shortened by 10% and 20%, respectively, compared to that of TA5599. The 5M<sup>e</sup>L arm has a gene conferring resistance to stem rust (*Puccinia graminis* f. sp. *tritici* Eriks. & E. Henn.) races RKQQC and TTKSK designated as *Sr53*. The Ti5DS·5DL-5M<sup>e</sup>L-5DL and T5DL-5MgL·5M<sup>e</sup>S stocks are new sources of resistance to Ug99, are cytogenetically stable, and may be useful in wheat improvement.

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### ***Notice of release of KS12WGGRC59 wheat streak mosaic virus- and Triticum mosaic virus-resistant wheat germ plasm.***

B. Friebe, W. Liu (Laboratory of Cell and Chromosome Engineering, College of Life Sciences, Henan Agricultural University, Zhengzhou, Henan 450002, PR China), L.L. Qi (USDA-ARS, Northern Crop Science Laboratory, Fargo, ND 58102-2765, USA), D.L. Wilson, W.J. Raupp, J. Poland and R.L. Bowden (USDA-ARS Hard Winter Wheat Genetic Research Unit); A.K. Fritz (Department of Agronomy), D.L. Seifers (Kansas State University, Agricultural Research Center, Hays, KS), and B.S. Gill.

The Agricultural Research Service, U.S. Department of Agriculture and the Kansas Agricultural Experiment Station announce the release of KS12WGGRC59 hard red winter wheat germ plasm with resistance to wheat streak mosaic virus and *Triticum* mosaic virus for breeding and experimental purposes. KS12WGGRC59 is derived from the cross 'TA3061/TA7700//TA3809 F<sub>4</sub>', where TA3061 is a Chinese Spring wheat stock monosomic for chromosome 7D (CSM7D), TA7700 is a ditelosomic wheat-*Thinopyrum intermedium* addition line having the long *Th. intermedium* chromosome arm 7S#3L added to the wheat genome, and TA3809 is a Chinese Spring stock homozygous for the *ph1b* mutant allele. KS08WGGRC59 has the 7S#3L translocated to the short arm of wheat chromosome 7B in form of the Robertsonian translocation T7BS·7S#3L. The 7S#3L arm has a gene conferring resistance to Wheat streak mosaic virus (WSMV) and *Triticum* mosaic virus (TriMV) designated as *Wsm3*. *Wsm3* confers resistance to WSMV at 18°C and 24° and also confers resistance to TriMV at 18°C but is not effective against this virus above 24°C. The T7BS·7S#3L stock is a new source of resistance to WSMV and TriMV, is cytogenetically stable, and may be useful in wheat improvement.

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- Olson E, Poland J, Bowden R, Rouse M, Jin Y, Friebe B, Gill BS, and Pumphrey M. 2011. Characterization of a stem rust resistance gene from *Aegilops tauschii* effective against stem rust race Ug99. PAG XVIII Abstract P310.
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