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Registration of Soybean Germplasm Lines Resistant to Stem Canker and Phytophthora Rot: D85-10404 and D85-10412

Soybean *[Glycine max (L.) Merr.]* germplasm lines D85-10404 (Reg. no. GP-170, PI 578246), and D85-10412 (Reg. no. GP-171, PI 578247) were developed by the USDA-ARS, Stoneville, MS, in cooperation with the Mississippi Agricultural and Forestry Experiment Station, Stoneville, and released July 1993. D85-10404 and D85-10412 have individual genes *Rdc1* and *Rdc2*, respectively, controlling resistance to the disease stem canker [caused by *Diaporthe phaseolorum* (Cooke & Ellis) Sacc. f. sp. *meridionalis* Morgan-Jones] (4). These lines provide valuable diagnostic tools for the identification of additional genes for resistance to this important soybean disease.

D85-10404 and D85-10412 were selected in the F5 generation from the cross 'Tracy-M' × J77-339. Tracy-M (1) is a highly productive, multiple pest-resistant Maturity Group VI cultivar. J77-339 is a breeding line originally selected for its highly productive, multiple pest-resistant Maturity Group VI, with D85-10404 having a maturity date similar to Tracy-M. Concurrent greenhouse inoculations indicated that D85-10404 (*Rdc1*) also has the major genes *Rpsl-c* and *Rps3*, and D85-10412 (*Rdc2*) has the gene *Rpsl-b* controlling resistance to the disease phytophthora rot (caused by *Phytophthora sojae* M.J. Kaufmann & J.W. Gerdemann). Pedigree selection method was used to advance the lines from the F1 to the F5 generation. D85-10404 and D85-10412 were harvested as bulk F5 rows. Seedlings from each line were again evaluated for resistance to stem canker and phytophthora rot to verify uniformity. D85-10404 and D85-10412 both have a determinate growth type, white flowers, tawny pubescence, tan pods, and yellow seeds with black hila. They are of Maturity Group VI, with D85-10404 having a maturity date similar to Tracy-M, with D85-10412 being 4 d earlier.

A sample of 50 seeds for research purposes will be available for at least 5 yr from the corresponding author.

T. C. KILEN* AND E. E. HARTWIG (5)

Registration of Two Wheat Germplasms Resistant to Russian Wheat Aphid: KS92WGRC24 and KS92WGRC25

KS92WGRC24 (Reg. no. GP-410, PI 574489), and KS92WGRC25 (Reg. no. GP-411, PI 574490) are Russian wheat aphid (RWA) (*Diuraphis noxia* (Mordvilko)) resistant winter wheat (*Triticum aestivum* L.) germplasms developed and released by the Kansas Agricultural Experiment Station, Manhattan, KS.

The pedigree of KS92WGRC24 is Yilmaz-10/HW196 and that of KS92WGRC25 is KS84HW196/'Dodge'. Both are increased from Eastern Turkey. It has hard white winter wheat germplasm (1) released by the Kansas Agricultural Experiment Station, Manhattan, KS.

The disease and insect resistance of these two lines are similar. They are resistant to stem rust (*Puccinia graminis* Pers.:Pers.), but susceptible to leaf rust (*P. recondita* Roberge ex Desmaz.), soilborne mosaic virus, and Hessian fly (*Mayetiola destructor* Say)).

Small quantities (15 seeds) of KS92WGRC24 and KS92WGRC25 are available upon request. Appropriate recognition of source should be given when these germplasms contribute to research or development of new cultivars. Seed stocks will be maintained by the Kansas Agricultural Experiment Station. Yilmaz-10, the RWA-resistant parent, is a landrace originating from Eastern Turkey. It has hard white seed and is resistant to stem rust, and has the gene *Rpsl-c*. It is resistant to aphid (RWA) (*Diuraphis noxia* (Mordvilko)) resistant winter wheat (*Triticum aestivum* L.) germplasm lines D85-10404 and D85-10412 were selected in the F5 generation from the cross 'Tracy-M' × J77-339. Tracy-M (1) is a highly productive, multiple pest-resistant Maturity Group VI cultivar. J77-339 is a breeding line originally selected for its highly productive, multiple pest-resistant Maturity Group VI, with D85-10404 having a maturity date similar to Tracy-M. Concurrent greenhouse inoculations indicated that D85-10404 (*Rdc1*) also has the major genes *Rpsl-c* and *Rps3*, and D85-10412 (*Rdc2*) has the gene *Rpsl-b* controlling resistance to the disease phytophthora rot (caused by *Phytophthora sojae* M.J. Kaufmann & J.W. Gerdemann). Pedigree selection method was used to advance the lines from the F1 to the F5 generation. D85-10404 and D85-10412 were harvested as bulk F5 rows. Seedlings from each line were again evaluated for resistance to stem canker and phytophthora rot to verify uniformity. D85-10404 and D85-10412 both have a determinate growth type, white flowers, tawny pubescence, tan pods, and yellow seeds with black hila. They are of Maturity Group VI, with D85-10404 having a maturity date similar to Tracy-M, with D85-10412 being 4 d earlier.

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