Registration of ‘Glory’ Wheat

‘Glory’ soft red winter wheat (Triticum aestivum L.) (Reg. no. CV-841, PI 592750) was developed by The Ohio State University, Ohio Agricultural Research and Development Center, and was released in 1992. Glory was developed from the cross ‘Tyler’/Pioneer 2550 and was designated with the cross number 2128B+R-11-3. It originated in 1984 from a single spike selected from an F3 bulk population and reselected in 1985 in the F4 generation. Glory was reselected from 60 uniform F4:8 heads in 1989. Progeny rows were selected for plant type uniformity in 1990, 1991, and 1992 and were bulked following the 1992 harvest to comprise breeder seed. Glory was released because of its high yield potential, lodging resistance, and winterhardiness.

Glory was evaluated under the experimental designation OH470 in statewide performance trials planted at six locations throughout Ohio from 1990 through 1993. Glory was further evaluated in the Four-State Regional Nursery (Illinois, Indiana, Missouri, and Ohio) from 1991 through 1993. The average yield of Glory was consistently higher than the mean in the regional nurseries indicating that Glory is regionally adapted.

In Ohio statewide trials, the average yield of Glory exceeded that of ‘Cardinal’, ‘Dynasty’, ‘Excel’, and ‘Freedom’. Glory is a medium-maturity, lodging-resistant cultivar, similar to Excel and Freedom in height. Glory has superior winter survival, comparable to Cardinal and Dynasty. Glory has exhibited moderate levels of adult-plant resistance to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici Em. Marchal.). The gene Pm3 is present, but no longer effective for resistance to powdery mildew in Ohio. Glory exhibits good resistance to the leaf and glume phases of stagonospora blotch [caused by Phaeosphaeria nodorum (E. Müller) Hedjaroude]. It is moderately resistant to wheat yellow mosaic virus (potyvirus), wheat soilborne mosaic virus (SBWMV), and barley yellow dwarf virus (BYDV). Glory possesses Lr11 plus an unidentified gene for resistance to leaf rust (caused by Puccinia recondita Roberge ex Desmaz.) but is susceptible to races of leaf rust present in Ohio. It is susceptible to stem rust (caused by Puccinia graminis Pers.:Pers.) and Hessian fly [Mayetiola destructor (Say)].

Glory was evaluated by the USDA-ARS Soft Wheat Quality Laboratory, Wooster, OH, from 1990 through 1992. Average flour yield of Glory was lower than that of Cardinal, ‘Abe’, Dynasty, Excel, and ‘Howell’ but equal to ‘Compton’ and Freedom. Average break flour yield and softness were similar to that of Cardinal. Flour protein of Glory was comparable to that of Cardinal, Dynasty, and Excel. Alkaline water retention capacity was average; cookie diameter was below average.

Glory’s juvenile growth habit is erect. Plant color is dark green at the boot stage. Stems are hollow, with four nodes. Auricles lack anthocyanin. Spikes are mostly erect and from 55 to 75 mm long at maturity, with white chaff color. At maturity, heads typically possess 15 spikelets and are apically awnletted, with tip awns measuring 10 to 15 mm in length. The last rachis internode is ovate, with narrow creases, rounded cheeks, and a noncollared, acuminate beaks. Kernels are red, midlong, and ovate; the kernel strength and high yield potential. During 2 yr (5 locations yr-1) in Georgia, Morey, GA-Andy, and ‘FL 304’ yielded an average of 3531, 3424, and 3524 kg ha-1, respectively. It is 1-2 d earlier in maturity and 8 cm shorter than Florida 304. It has excellent lodging resistance. Milling and baking qualities of Morey are rated acceptable for soft red winter wheat. Morey isregionally, and was released because of its high yield potential, lodging resistance, and winterhardiness.

Morey was derived from a single cross made in 1985 at the Coastal Plain Station. The cultivar was developed using a modified pedigree method of breeding. Morey was tested as GA 85238 in nursery plots in 6 locations in 1992 and 1993, and in the Uniform Soft Red Winter Wheat Nursery at about 30 locations in 1993.

Morey is very early maturing in the U.S. coastal plain. ‘GA-Andy’) and has a low vernalization requirement. It has excellent lodging resistance. Milling and baking characteristics of Morey are rated acceptable for soft red winter wheat. Morey is regionally adapted.

The spikes are middense, tapering, and erect. Glumes are pubescent. Glumes are medium to wide, with obtuse to acuminate beaks. Kernels are red, midlong, and ovate, with white chaff color. Kernels are large, averaging 7 mm long and 5 mm wide. Morey is regionally adapted.

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References and Notes

1. Dep. of Horticulture and Crop Science, The Ohio State University, Columbus, OH 43210. H.N. Lafever is retired. Salaries are provided by the Foundation, Ohio Agric. Exp. Sta., and federal funds appropriated. OARDC Journal Article no. 38-96. Registration Title V protection for Glory under the provisions of the U.S. Plant Variety Protection Act is pending (no. 9500288). Production of Foundation, Registered, and Certified seed will be permitted under the provisions of the U.S. Plant Variety Protection Act.

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