spelt. Winterhardiness of Champ appears equal to common spelt, but is superior to most popular wheat cultivars in Ohio. Heading date of Champ is 1 d earlier than common spelt. Percent protein of Champ has averaged 11.7% while common spelt averaged 10.5%, a relatively important trait because spelt is commonly used as an alternative to spring or winter oat as a feed grain. Foliage is dark green.

Champ possesses resistance to leaf rust (caused by Puccinia recondita Rob. ex. Desm. f. sp. tritici), but only moderate resistance to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici E. Marchal). It is also very resistant to wheat spindle streak mosaic virus (WSSM) and has exhibited good field resistance to loose smut [caused by Ustilago tritici (Pers.) Rostr.]

Application for protection under the Plant Variety Protection Act is planned. Breeder seed of Champ will be maintained by the Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, OH 44691.

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References and Notes

1. Dept. of Agronomy, Ohio Agric. Res. and Development Ctr., The Ohio State Univ., Wooster, OH 44691. Salaries and research support were provided by state and federal funds appropriated to The Ohio State Univ.-Ohio Agric. Res. and Development Ctr. Journal Article no. 95-87. Registration by CSSA. Accepted 30 Sept. 1987. *Corresponding author.


REGISTRATION OF ‘GR855′ WHEAT

‘GR855’, PI 508286, is a soft red winter wheat (Triticum aestivum L.) (Reg. no. 729) developed by the Ohio Agricultural Research and Development Center and officially released in 1985. This cultivar has been licensed to the Agricultural Genetic Research Association (AGRA), with this organization granted exclusive rights to sublicense, produce, promote, and market the cultivar. However, ownership of GR855 has been retained by the Ohio Agricultural Research and Development Center, The Ohio State University. GR855 was tested prior to release as OH 235 in state-wide trials in Ohio from 1980 through 1984 and in the Uniform Eastern Soft Red Winter Wheat Nursery from 1981 through 1984. GR855 was selected for release primarily due to its superior yield record in comparison to currently popular ‘Titan’, ‘Hart’, and ‘Cardinal’, and its excellent lodging resistance.

GR855 is a selection from the cross of Hart/Va 66-54-10, a plant consisting of the bulked progeny of 17 F1 plants. GR855 is a sister line of ‘Baker’, but is 2 d earlier in maturity. GR855 also differs from Baker in disease resistance and glume characteristics.

GR855 is an extremely short, early maturing cultivar with excellent winterhardness under Ohio conditions. It averaged the same height (81 cm), 2 d earlier, and 1% higher winter survival than Baker in 30 tests in Ohio from 1980 through 1984.

GR855 has apically awnletted, fusiform, upright spikes with white glumes. Glumes are short, medium-wide to wide with rounded to square shoulders and obtuse beaks. Kernels are ovate and red with a medium-length noncollared brush. Coleoptile color is purple, but seedlings typically exhibit no anthocyanin. Plant color is blue-green at boot stage while another color at anthesis is yellow.

GR855 is only moderately tolerant to acid soil conditions. It is highly resistant to natural infections of loose smut [caused by Ustilago tritici (Pers.) Rostr.], but susceptible to field races of leaf rust (caused by Puccinia recondita Rob. ex. Desm. f. sp. tritici). GR855 is resistant to powdery mildew (caused by Erysiphe graminis DG. f. sp. tritici E. Marchal) and to wheat spindle streak mosaic virus (WSSM). GR855 possesses the H2 gene for resistance to races GP, A, C, and F of Hessian fly (Mayetiola destructor Say).

GR855 was found to possess excellent soft wheat milling and baking qualities in evaluations by the USDA-ARS Soft Wheat Quality, Wooster, OH. It ranked 12th among 32 entries in the 1982 Uniform Eastern Soft Red Winter Wheat Nursery and 12th among 34 entries in 1983.

Grain yields of GR855, Becker, Hart, and Titan averaged over 5 yr of tests (1980–1984) totaling 30 location-yr in Ohio are 3924, 3964, 3901, and 3816 kg ha−1, respectively. In comparative tests in Ohio with ‘Caldwell’, only six trials in 2 yr contained these two cultivars in which GR855 averaged 4083 kg ha−1 while Caldwell yielded 4018 kg ha−1.

GR855 has been found to be particularly well suited for production under high fertility conditions due to its excellent straw strength. Foliar diseases, especially leaf rust, should be closely monitored under high fertility conditions, due to GR855’s susceptibility to this disease.

Foundation seed of GR855 was first distributed to AGRA members in the fall of 1985. Protection has been applied for under the Plant Variety Protection Act (Application no. 8600153) in accordance with the certified seed option; specifying that GR855 may be sold by cultivar name only as a class of certified seed. Only foundation and certified classes of seed are permitted beyond breeder seed. Breeder seed will be maintained by the Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, OH 44691.

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References and Notes

1. Dept. of Agronomy, Ohio Agric. Res. and Development Ctr., The Ohio State Univ., Wooster, OH 44691. Salaries and research support were provided by state and federal funds appropriated to The Ohio State Univ.-Ohio Agric. Res. and Development Ctr. Journal Article no. 97-87. Registration by CSSA. Accepted 30 Sept. 1987. *Corresponding author.

Published in Crop Sci. 28:378 (1988).

REGISTRATION OF ‘SEWARD’ WHEAT

‘SEWARD’ wheat (Triticum aestivum L.) (Reg. no. 730), PI 508289, is a hard red winter wheat originating as an F2-derived line from the cross ‘Centurk’/‘Froid’/Norstar’ made in 1974. Froid and Norstar are tall, winter hardy, stem rust (caused by Puccinia graminis Pers. f. sp. tritici Eriks. and Henn.) susceptible winter wheat cultivars. Centurk is a medium short, stem rust resistant wheat that is less winter harder than Norstar and Froid. Seward was developed cooperatively by the North Dakota Agricultural Experiment Station and the USDA-ARS, and approved for release in March 1987. It was designated as ND8002 in North Dakota yield tests beginning in 1982 and evaluated in the Northern Regional Performance Nursery in 1985 and 1986.

The level of winterhardiness of Seward is between that of