neum Nir. & Ika.); strawbreaker foot rot (caused by Pseudocercosporella herpotrichoides [Fron. Deighton]); and dwarf smut (caused by Tilletia controversa Kühn in Rabenh.).

Kmor was included in the Western Regional Soft White Winter Wheat Nursery from 1987 to 1989. When the grain production was averaged across 47 site-years, Kmoro produced 5, 6, 8.5, and 18.6% more grain per hectare than ‘Lewjain’, ‘Madsen’, ‘Daws’, and ‘Stephens’, respectively. Kmoro is ~8 cm taller and matures ~2 d later than Daws. Volume weight of Kmoro averaged 2% below that of Daws and the grain protein content of Kmoro is equal to or lower than that of Daws.

Tests conducted by the USDA-ARS Western Wheat Quality Laboratory have established that Kmoro has satisfactory milling and baking quality. Kmoro equals or exceeds ‘Nugaines’, Daws, and Stephens in milling score and baking quality.

Kmor is adapted to the wheat growing areas of northern Idaho, eastern Oregon, and eastern Washington. Breeder and foundation seed will be maintained by the Washington State Crop Improvement Association under supervision of the Crop and Soil Sciences Department, College of Agriculture and Home Economics Research Center, Washington State University, Pullman, WA 99164-6420. Registration by CSSA. Accepted 30 April 1991. *Corresponding author.


REGISTRATION OF ‘WAKEFIELD’ WHEAT

‘WAKEFIELD’ (Reg. no. CV-768, PI 547040) is a soft red winter wheat (Triticum aestivum L.) cultivar developed by T.M. Starling and released in July 1990 by the Virginia Agricultural Experiment Station. Wakefield was selected in 1983 as a F6-derived F1 line from one of four populations in which CI 13836/8* ‘Chancellor’ was used as a source of resistance to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici Em. Marchal). The four populations, ‘Arthur’/CI 13836/8*Chancellor, VA 68-22-7/CI 13836/8*Chancellor, ‘Doublecrop’/‘Abe’/VA 68-24-42/3/CI 13836/8*Chancellor, and ‘Oasis’/VA 68-24-42/CI 13836/8*Chancellor, were composed in the F1 generation, and advanced using a modified bulk breeding method.

Coleoptiles of Wakefield are partially colored light purple, and anthers are yellow with some anthocyanin at the base. Spikes are fusiform to oblong, middense, and awnleted. Glumes are white to cream colored, long, and midwide to wide with oblique shoulders and acute beaks. Kernels of Wakefield are red, soft, midlong, and ovate with a narrow and middeep crease, rounded cheeks and a midlong brush. The phenol reaction is brown.

‘Wakefield’ has the Lr1 gene for resistance to powdery mildew resistance, but is susceptible to powdery mildew throughout most of Virginia. Seeding tests at the Cereal Rust Lab, St, Paul, MN, infer that Wakefield has the Lr10 gene for resistance to leaf rust (caused by Puccinia recondita Roberge ex Desm.).

Wakefield has good to very good milling characteristics and good baking properties based on 1987 to 1989 crop evaluations conducted at the Soft Wheat Quality Lab, Wooster, OH. The milling and baking characteristics of Wakefield are similar to ‘Tyler’.

Wakefield was tested as VA 85-52-34 in 33 trials in Virginia from 1986 to 1990. Mean grain yields of Wakefield, ‘Massey’, ‘Saluda’, and Tyler were 4900, 4500, 4230, and 4160 kg ha⁻¹, respectively. The grain volume weight of Wakefield (737 kg m⁻³) has been similar to Tyler (730 kg m⁻³), and less than Massey (753 kg m⁻³) and Saluda (765 kg m⁻³). Spike emergence of Wakefield is 2 d earlier than Tyler, and 1 to 2 d later than Massey and Saluda. Wakefield is similar in plant height to Massey. The lodging resistance of Wakefield is greater than Massey and Saluda.

Wakefield was tested regionally in the Uniform Southern Soft Red Winter Wheat Nursery in 1988 and 1989, and in the Uniform Eastern Soft Red Winter Wheat Nursery in 1989 and 1990. Performance of Wakefield in these nurseries suggests that it is also adapted to areas outside the mid-Atlantic region.

Authorized seed classes will be breeder, foundation, and certified. Application for plant variety protection has been made for Wakefield. Breeder and foundation seed will be maintained by the Virginia Crop Improvement Association under the auspices of the Virginia Agricultural Experiment Station, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.

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References and Notes

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REGISTRATION OF ‘MADISON’ WHEAT

‘MADISON’ (Reg. no. CV-769, PI 547041) is an early-maturing soft red winter wheat (Triticum aestivum L.) cultivar developed by T.M. Starling and released in July, 1990 by the Virginia Agricultural Experiment Station. Madison was selected in 1983 as a F6-derived F1 line from the cross series ‘Abe’/‘Blueboy’/VA 71-54-147/3/VA 72-54-14, using a modified bulk breeding method.

Coleoptiles of Madison are white, and anthers are yellow. Spikes are fusiform, middense, and awnleted. Glumes are white to cream colored, long, and midwide with oblique to rounded shoulders and acute beaks. Kernels of Madison are red, soft, midlong, and ovate with a narrow and middeep crease, rounded cheeks and a midlong brush. The phenol reaction is brown.

Madison is moderately resistant to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici Em. Marchal) in both the seedling and adult-plant stages. Seeding tests at the Cereal Rust Lab, St. Paul, MN, infer that Madison has Lr10 and Lr11 genes for resistance to leaf rust (caused by Puccinia recondita Roberge ex Desmaz.) and Sr6, Sr17, and Sr36 for resistance to stem rust (caused by Puccinia graminis Pers.: Pers.). Madison is resistant to wheat spindle streak.