REGISTRATION OF WHEATON WHEAT

'WHEATON', PI 469271, is a hard red spring wheat (Triticum aestivum L.) (Reg. no. 684) developed and released cooperatively by the Minnesota Agricultural Experiment Station and USDA-ARS in 1983. Wheaton originated from a plant selection in an F5 row of the cross 'Crim' (CI 13465)/2*Era' (CI 13986)//Bui-Gallo and was made in 1973. Bui-Gallo, an experimental line from the International Maize and Wheat Improvement Center (CIMMYT), originated from a cross of 'Buitre'/'Gallo'. Wheaton was tested in state and regional trials as MN 73168. MN 73168 was first entered in Minnesota yield trials in 1977 and in the Uniform Regional Hard Red Spring Wheat Nursery in 1979.

Wheaton's main attributes are higher yield, earlier heading, and more lodging resistance, compared to Era. Wheaton has averaged 6% higher grain yield than Era in Minnesota and 4% higher over 3 years of testing in the Uniform Regional Hard Red Spring Wheat Nursery. It is about 2% lower in test weight, 4 days earlier to head, and 2 cm shorter in plant height.

Wheaton's spike is awned, fusiform, and middense. The glumes are glabrous and white, shoulders oblique, and beaks are acuminate and midlong. The kernel shape is ovate, midlong to long, with midrounded cheeks and the crease is midwide and middeep to deep. The brush is midsize and short to midlong.

Wheaton is resistant to prevalent races of stem rust (caused by Puccinia graminis Pers. f. sp. tritici Eriks. and E. Henn.) and moderately resistant to leaf rust (caused by Puccinia recondita Rob. ex Desm. f. sp. tritici) possessing both seedling and adult plant resistance genes. It is moderately resistant to loose smut (caused by Ustilago tritici Pers.) and to ergot (caused by Claviceps purpurea (Fr) Tul.)

In general, Wheaton has satisfactory milling performance, mixing characteristics, and general breadmaking quality; but it is low in grain protein percent compared to Era. Foundation seed of Wheaton was distributed to registered seed producers in 1983. Breeders' seed will be maintained by the Minnesota Crop Improvement Assoc., 1900 Hendon Ave., St. Paul, MN 55108. Application will be made for Plant Variety Protection with seed certification option.

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References and Notes

1. Research geneticist and professor, USDA-ARS and Plant Genetics; research plant pathologist, USDA-ARS; assistant scientist, Dep. of Agronomy and Plant Genetics; professor, Dep. of Plant Pathology; and former professor, Dep. of Agronomy and Plant Genetics, Univ. of Minnesota, St. Paul, MN. USDA-ARS and Minnesota Agric. Exp. Stn., St. Paul, MN. Registration by the Crop Sci. Soc. of Am. Accepted 9 Nov. 1983.