REGISTRATION OF 'HILLSDALE' WHEAT

'HILLSDALE', (PI498686) a soft red winter wheat (Triticum aestivum L.) (Reg. no. 710) developed at the Michigan State University Agricultural Experiment Station in cooperation with USDA-ARS, was released in 1983. It was tested in Michigan and regionally as B6310 and M0295. It was named for the city of Hillsdale, the site of one of the early grist mills in Michigan and a milling center since 1837. Hillsdale has good soft wheat milling and baking quality. One of its unique features is strong pre-harvest dormancy.

Pedigree selections for powdery mildew resistance were made from F₂ and F₃ headrows; winterhardiness and pre-harvest dormancy were evaluated in the F₅ and subsequent generations; selection for milling and baking quality was made from F₅ headrows. Seed from approximately 700 individual head rows, which were phenotypically similar, were increased in 6.5 m² plots, rechecked for plant type, height, glume color, maturity, kernel color, and bulked for breeder's seed.

Hillsdale was evaluated in advanced nurseries from 1978 to 1983 and in the Uniform Eastern Soft Red Winter Wheat Performance Nursery in 1982 and 1983. In 41 nurseries at eight locations in Michigan, Hillsdale exceeded 'Arthur' in yield by 21% and had about the same yield level as 'Augusta' and 'Frankenmuth'. Milling and baking qualities were evaluated from 1978 through 1983. This cultivar has good seed size with kernel test weight similar to 'Genesee' and Frankenmuth. Hillsdale has good soft wheat milling and baking quality. One of its unique features is strong pre-harvest seed dormancy.

Hillsdale is a soft red winter wheat cultivar with apical awns, brown glumes at maturity, and a rather large head that tapers slightly. Hillsdale heads at the same time as Augusta and Frankenmuth and 6 days later than Arthur. Hillsdale has averaged 1.04 m in height. The cultivar closest in appearance to Hillsdale is Frankenmuth, which has white seed and is resistant to biotype A and C of Hessian fly.

Hillsdale has two genes for resistance to powdery mildew. Hillsdale has no Hessian fly [Mayetiola destructor (Say)] resistance.

Variety protection has been applied for under the Plant Variety Protection Act, Public Law 91–577, in accordance with the certified seed option, which specifies that Hillsdale may be sold only by cultivar name as a class of certified seed. Only two generations from Breeder seed are permitted. Breeder seed is maintained by the Michigan State University Agricultural Experiment Station, East Lansing, MI 48824.


References and Notes


REGISTRATION OF 'TRES' WHEAT

'TRES', (Triticum aestivum L.) (Reg. no. 711, CI17917), is a soft white club winter wheat cultivar developed cooperatively by the USDA-ARS and the College of Agriculture and Home Economics of Washington State University. It was jointly released by USDA-ARS and the Agricultural Experiment Station of Washington, Oregon, and Idaho in August 1984.

Tres was derived from a single F₀ plant selected in 1973 from the cross CI12666/6*Omar73/r. i/v/te/'Coastal'//VA66-54-10. It is an intermediate, one-gene semiflour cultivar with awnleted compact spikes, white glumes, and white straw. Its kernels are white, short, soft, ovate with a small germ, and short brush.

Tres expresses intermediate adult-plant resistance to the prevalent U.S. Pacific Northwest races of stripe rust (caused by Puccinia striiformis West.) and leaf rust (caused by Puccinia recondita Rob. ex Desm. f. sp. tritici). Tres is resistant to the current local stripe rust races (R. F. Line, 1985, personal communication). It has moderate resistance to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici E. Marshall). It is genetically heterogeneous for resistance to common bunt (caused by Tilletia caries (DC.) Tul. & West.) and leaf rust (caused by Puccinia striiformis West.). Tres is moderately susceptible to strawbreaker foot rot (caused by Psuedocercospora herpotrichoides (Fron) Dei.); it is susceptible to flag smut (caused by Urocystis agropyri (Preuss) Schroer.), cephalexini stripe (caused by Cephalosporiopsis nicosiae Nis. & Ika.), dwarf bunt (caused by Tilletia controversa Kühn.), and stem rust (caused by Puccinia graminis Pers. f. sp. tritici Eriks. & Henn.).

Tres was tested as WA 6698 in Washington State trials in 1978 to 1984 and in the Western Regional White Winter Wheat Nursery during 1980 to 1984. Tres has high yield