References and Notes


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Registration of ‘Ernie’ Wheat

‘Ernie’ soft red winter wheat (Triticum aestivum L.) (Reg. no. CV-811, PI 584525) was developed by the Missouri Agricultural Experiment Station and released in 1994. Ernie originated from the cross ‘Pike’/MO9965 made in 1980. MO9965 is from the cross ‘Stoddard’/‘Blueboy’/Stoddard/D1707. D1707 is a two-gene semidwarf line from India derived from CIMMYT germplasm. Ernie was selected in 1988 as an F1-derived F2 line. The name Ernie was chosen to recognize the contributions of Ernest R. Sears to wheat research.

Ernie is a white-chaffed, apically awnletted soft red winter wheat with midlong tapering spikes. The coleoptiles are white and the anthers are yellow. Glumes are white, long and narrow. Kernels of Ernie are red, soft, large, midlong, and ovate with a narrow and shallow crease, rounded cheeks and a small to midsized brush. Ernie is moderately resistant to septoria leaf blotch (caused by Septoria tritici Roberge ex Desmaz.) but does have two genes Sr36 (Sr6 and Sr9) for resistance to leaf rust (caused by Puccinia graminis) and two genes for resistance to leaf rust (caused by Puccinia recondita Roberge ex Desmaz.) but does have two genes (Sr6 and Sr9) for resistance to stem rust (caused by Puccinia graminis Pers.:Pers.). Ernie is resistant to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici Ém. Marchal; syn. Blumeria graminis) with an infection pattern similar to ‘Pioneer 2548’. Ernie appears to have some tolerance to scab (caused by Gibberella zeae (Schweinitz) Petch; anamorph Fusarium graminearum Schwabe) with a reaction similar to ‘Freedom’ and has field resistance to barley yellow dwarf virus, similar in reaction to Pioneer 2548. The USDA-ARS Cereal Rust Laboratory at St. Paul, MN, has postulated that Ernie has no major genes for resistance to leaf rust (caused by Puccinia recondita Roberge ex Desmaz.) but does have two genes (Sr6 and Sr9) for resistance to stem rust (caused by Puccinia graminis Pers.:Pers.). Ernie is considered susceptible to leaf rust and moderately susceptible to stem rust under Missouri field conditions. Ernie is susceptible to all Hessian fly [Mayetiola destructor (Say)] biotypes. Ernie was tested as MO12256 in Missouri breeding trials from 1989 to 1993. It has been evaluated in Missouri Winter Wheat Performance Tests since 1992. Across 22 location-years of testing in Missouri, the yield of Ernie (3575 kg ha−1) was equivalent to ‘Clark’, and is 3, 4, and 5 d earlier than Pioneer 2548, Wakefield, and Cardinal, respectively. Ernie is a short cultivar (3, 12, and 15 cm shorter than Pioneer 2548, Wakefield, and Cardinal, respectively).

Winterhardiness is similar to Cardinal and Wakefield, but less than Pioneer 2548. The lodging resistance of Ernie is similar to ‘Caldwell’; it may lodge under high-N conditions. Ernie has excellent threshability but does not shatter as much as other early cultivars.

Ernie has very good to excellent milling and baking quality, based on 1989 to 1992 crop evaluations conducted at the USDA-ARS Soft Wheat Quality Laboratory in Wooster, OH. Across seven Missouri location-years of data, the overall milling quality score for Ernie was similar to Caldwell and Cardinal. The overall baking quality score for Ernie was similar to Caldwell and superior to Cardinal. Authorized seed classes will be Breeder, Foundation, and Certified. Application for U.S. plant variety protection will be made under the Title V option. Breeder and foundation seed will be maintained by the Missouri Agricultural Experiment Station, Columbia, MO.

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References and Notes

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Registration of ‘AC Michael’ Wheat

‘AC Michael’ hard red spring wheat (Triticum aestivum L.) (Reg. no. CV-809, PI 583978) was developed by Agriculture and Agri-Food Canada, Lacombe Research Centre, Lacombe, AB, and released as a cultivar in 1993. It was developed from a ‘Park’/‘Neepawa’ cross made at the University of Alberta, Edmonton, AB, in 1982. Park is an early-maturing hard red spring (HRS) wheat developed by Agriculture and Agri-Food Canada, Lacombe Research Centre, and released in 1963 (1). Neepawa is a midseason HRS wheat cultivar developed by Agriculture and Agri-Food Canada, Winnipeg Research Centre, Winnipeg, MB, and released in 1969 (2).

The F1 generation from the Park/Neepawa cross was grown at the University of Alberta Research Farm in 1982. The F2, though F1 generations were propagated in growth chambers using single-seed descent. In 1986, F2 head rows were grown at the Lacombe Research Centre and selected for maturity, lodging resistance, and morphological uniformity. Each selected F2 head-row plot was harvested in bulk. The F2-derived lines were grown in a total of 16 replicated multilocation trials in Alberta during the F3, F4, and F5 generations, and evaluated for agronomic and end-use quality traits (including yield, lodging resistance, test weight, kernel weight, kernel size and shape, kernel hardness, Hagberg falling number, and protein content). In each of these tests, Park and Neepawa were included as check cultivars. The performance of AC Michael, which was designated as line LAW-135-001, was equal to, or better than, Park and Neepawa with respect to most of the characteristics examined. In 1990, AC Michael was assigned the experimental designation BW653 and advanced to the Western Cooperative Bread Wheat Test, where it performed better than the check cultivars. It was registered (Reg. no. 3863) by the Plant Variety Registration Office, Food Production and Inspection Branch, of Agriculture and Agri-Food Canada on 12 Jan. 1994.

Arkansas, Illinois, and Indiana. Spike emergence of Ernie is equivalent to ‘Clark’, and is 3, 4, and 5 d earlier than Pioneer 2548, Wakefield, and Cardinal, respectively. Ernie is a short cultivar (3, 12, and 15 cm shorter than Pioneer 2548, Wakefield, and Cardinal, respectively).

The overall lodging resistance score for Ernie was similar to Caldwell and superior to Cardinal. Authorized seed classes will be Breeder, Foundation, and Certified. Application for U.S. plant variety protection will be made under the Title V option. Breeder and foundation seed will be maintained by the Missouri Agricultural Experiment Station, Columbia, MO.