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REGISTRATION OF 'KEISER' WHEAT

'KEISER', (Reg. no. 739) PI 515970, is a soft red winter wheat (Triticum aestivum L.) developed by the Arkansas Agricultural Experiment Station. Keiser originated from the cross made in 1969 of Purdue 5724B3-5P-8-2/7'Blueboy'. The breeding line, Purdue 5724B3-5P-8-2, was derived from the same cross as 'Bemhar' and was also one of the parents of 'Caldwell'. Keiser originated from an F1 single plant selection in 1972, and in the F2, was reselected for uniformity by Dr. Fred Collins formerly with the University of Arkansas. In the F3, approximately 70 of 100 head rows were selected to purify for plant height, awnlessness, and spike color and shape. The selected head rows were composited to form breeder seed. It was released to seed producers in 1987.

Keiser was tested regionally as AR 48-7-4 in the Uniform Southern and Eastern Soft Red Winter Wheat Nurseries from 1983 to 1985 and state-wide in the Arkansas yield trials from 1985 to 1987. Keiser was released primarily for its disease resistance and yield potential. In the state yield trials from 1985 to 1987 Keiser yielded 7% more than 'Rosen'. Under Arkansas conditions Keiser has shown good resistance to leaf rust (caused by Puccinia recondita) and to septoria tritici blotch [incited by Cephalosporium gramineum (Funkel) Schroeter]. It is moderately resistant to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici) and to black spot (caused by Cercospora leaf spot DC. f. sp. tritici) and to rust (caused by Puccinia recondita) and to Hessian fly [Mayetiola destructor (Say)]. Cody has an intermediate reaction to soilborne mosaic virus. Keiser appears to have field tolerance to take-all (Gaeumannomyces graminis E. Marchal). It is resistant to leaf and stem rust resistance caused by Puccinia recondita Rob. ex Desm. f. sp. tritici Eriks. The Warrior*5/Agent (68F6635) parental line was developed by the Colorado Agricultural Experiment Station. Cody was developed cooperatively by the Nebraska Agricultural Research Division and the USDA-ARS. It was identified as a line in 1977 and tested as NE 77465 in Nebraska yield trials beginning in 1978. In 1981 to 1983 it was evaluated in the Northern Regional Performance Nursery and in the Southern Regional Performance Nursery in 1986.

Cody is similar to Centurk 78 in plant height and maturity but more winterhardy and lodges somewhat less. It has exceeded Centurk 78 in yield by 7% over 6 yr of state testing.

The spikes of Cody have moderately long, mid-dense heads, tapering to strap in shape with a tendency toward clavate under certain environmental conditions. The awns are white and medium in length. Glumes are white, glabrous, and slightly shorter than those of Centurk 78. The glumes are rounded to square. Beak length is moderately long to long. Grain of Cody is red, hard, elliptical to ovate, and with a medium germ. The brush is short and not collared. The cheeks are rounded, and the crease narrow and shallow. Kernels are about 10% heavier in weight than those of Centurk 78.

The milling and baking qualities of Cody are similar to those of Centurk 78 but with stronger dough characteristics as measured by the mixograph. Grain protein content is similar to Centurk 78 at comparable grain yields.

Cephalosporium stripe (caused by Cephalosporium gramineum Nils. and Ika.) provided Cody the least infection of all the cultivars at the North Platte, NE station. This tolerance was the basic reason for the release of Cody as a cultivar for production in the area around North Platte. The leaf rust and stem rust (incited by Puccinia graminis Pers. f. sp. tritici Eriks. and E. Henne.) reaction of Cody is moderately resistant. Cody has the Lr24 and Sr24 genes of Agent (NEREC) is located. The original selection and subsequent reselection as well as seed increases occurred at the NEREC. This cultivar also appears to be well adapted to the heavy- to medium-textured soils found near the NEREC. Variety protection under the Plant Variety Protection Act is not anticipated. Breeder and foundation seed of Keiser is maintained by the Arkansas Agricultural Experiment Station, Fayetteville, AR 72701.

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References and Notes
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