Registration of 'Grant' Wheat

'Grant' soft red winter wheat (Triticum aestivum L.) (Reg. no. CV-801, PI 572548), was developed by the Purdue University Agriculture Research Programs in cooperation with the USDA-ARS. Grant was tested as P811670A9-10-6-7-63 and was released in 1993. Grant, or its closely related and indistinguishable parent line, P811670A9-10-6-7, has been tested in replicated performance trials at Lafayette, IN, since 1987; at Sullivan, IN, since 1991; in Indiana small grains performance trials since 1991; in the four-state (Illinois, Indiana, Missouri, Ohio) Regional Nursery in 1989 and 1991; and in the Uniform Eastern Soft Red Winter Wheat Nursery in 1992. It has been tested in disease nurseries at Lafayette since 1985, and its soft wheat milling and baking characteristics have been evaluated since 1988 at the USDA-ARS Soft Wheat Quality Laboratory, Wooster, OH.

Grant was selected from the progeny of the cross 'Caldwell'/ 'Beau'/Kavkaz'. Caldwell and Beau are soft red winter wheat cultivars adapted to Indiana. Kavkaz is a Russian winter wheat cultivar having a 1B-1R translocation with Lr26 resistance to leaf rust (caused by Puccinia recondita Roberge ex Desmaz.) and resistance from rye to powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici Ém. Marchal). The cross was made and subsequent selection was carried out to transfer resistance to leaf rust and powdery mildew from Kavkaz, and large kernel size from Beau and Kavkaz to Caldwell. Caldwell contributed excellent soft wheat milling and baking qualities and early maturity. Grant was developed by a modified pedigree method of breeding with plant selections made in the F3, F4, F5, and F6 generations. Grant has been uniform and true breeding during development of breeder seed. Most of the approximately 0.2% of variant spikes are characteristic of the cultivar type, but are 1cm taller than other spikes. Breeder seed, produced in 1993, was the F13 generation.

Grant is similar to Caldwell for general plant type characteristics; however, averaged over 8yr (1987–1994) at Lafayette, IN, Grant produced 5185 kg ha⁻¹, compared with 4896 kg ha⁻¹ for Caldwell. Grant heads 1 to 2 d later, is 5 cm shorter, has stronger straw, and has a higher percentage winter survival in Indiana than Caldwell. Grant has Sr31, Lr26, and Pm8 from Kavkaz, and it has resistance to wheat soilborne mosaic, wheat spindle streak mosaic, and take-all [caused by Gaemannomyces graminis (Sacc.) Arx & D. Olivier var. tritici J. Walker]. Septoria leaf blotch (caused by Septoria tritici Roberge in Desmaz.) and glume blotch [caused by Stagonospora nodorum (Berk.) Castellani & E. G. Germano] develop less on Grant than on Caldwell. It has H5 for resistance to Hessian fly [Mayetiola destructor (Say)]. Soft wheat milling and baking scores for Grant are similar to those of Caldwell.

Plant color of Grant at booting is green and anthers are yellow. The stem does not have anthocyanin and has a waxy bloom. Stem internodes are hollow and hairy; the last internode is smooth with red anthers. The auricles are absent and the stem is waxy. The flag leaf is semi-erect, medium length and width, shoulders are square, and beaks are absent. The flag leaf is erect, not twisted, has a waxy bloom. Stem internodes are hollow and hairs of the last internode are absent. Kavkaz, and it has resistance to wheat soilborne mosaic, wheat spindle streak mosaic, and take-all [caused by Gaeumannomyces graminis Sacc.].

Registration of ‘Affinity’ Perennial Ryegrass

‘Affinity’ perennial ryegrass (Lolium perenne L. CV-176, PI 577796) was developed by the Connecticut Agricultural Experiment Station, New Haven, CT, in January 1993. The experimental designation of Affinity was GEN-90.

Affinity is an advanced-generation synthetic cultivar selected from the maternal half-sib progeny of a cross between Loretta and a Samuels endophyte. Half-sib progeny of the cross were developed and subsequently intercrossed at various intervals to maintain needed genetic diversity. The parental germplasm of Affinity traces to plants selected from old turfs located in Maryland, Pennsylvania, and New York City between 1962 and 1977. The remaining germplasm traces to plants selected from Purdue University Agriculture Research Programs, West Lafayette, IN 47907.

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References and Notes

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