Registration of 'Ben' Durum Wheat

'Ben' (Reg. no. CV-858, PI 596557), spring durum wheat (Triticum turgidum L. var. durum), was developed by the North Dakota Agricultural Experiment Station in cooperation with USDA-ARS and released on 27 Mar. 1996. Ben was selected as D87130 from the cross D8024'/Monroe' (2) made in 1983 by R.G. Cantrell. The parent D8024 was derived from the cross D76119'/Vie'. The pedigree of D76119 is D68111'/Rugby'/'Ward'. Ben was developed using the pedigree method and was bulked in the F3 generation as an F2-derived line in 1987. Ben was named in honor of Ben Hoag, former agronomist and director of the North Central Research Extension Center at Minot, ND, in recognition of his contributions to North Dakota agriculture.

Ben was released because of its high yield, high test weight, large kernels, strong gluten, and medium height. Ben is a stiff-stawed daylength-sensitive durum wheat that is similar in heading date to 'Renville' (1) and is 1 d later than Vic (4). Ben's plant height averages 5.2 cm shorter than Vie and Renville and 20.3 cm taller than the semidwarf cultivar Lloyd (3). The culms are white and the peduncle is slightly recurved. Ben's spikes are long, awned, oblong, middense, and erect. The awns are white and 13 to 16 cm in length. The glumes are glabrous, white, long, and wide. The kernels are amber, hard, long, and elliptical; the germ is midsized; the crease is midwide and shallow; and the brush is absent.

The grain yield of Ben was 9.2 and 1.6% greater than that of Vic and Renville, respectively, based on 57 location-years of testing in the Uniform Regional Durum Nursery from 1991 to 1995. Ben exhibited a similar yield advantage over Vic and Renville based on 27 location-years in the North Dakota Research Extension Centers' varietal trials from 1991 to 1995. Ben has good yield potential across the state of North Dakota and is recommended for the Minot area. Ben has 772.2 kg m⁻¹ grain volume weight and 42.4 mg kernel weight, which is greater than Renville by 14.2 kg m⁻¹ and 4.9 mg, respectively.

Based on 32 location-years in North Dakota field plots (1991–1995), the semolina extraction rate of Ben on the Buhler-Maig laboratory mill is 0.4% less than Renville and 0.4% higher than Vic. Other milling characteristics and spaghetti color were favorable. Ben has strong gluten mixing characteristics (classification: 5.4) as estimated by mixograph, slightly stronger than Vic and Renville (classification: 5.8). Semolina protein of Ben was 137 g kg⁻¹, which was similar to Vic and Renville.

Ben is highly resistant to most races of wheat stem rust (caused by Puccinia graminis Pers.:Pers.). The adult plant resistance to leaf rust (caused by P. recondita Roberge ex Desmaz.) is high, and similar to Vic and Renville. Ben has resistance to tan spot [caused by Pyrenophora tritici-repentis (Died.) Drechs.] and moderate resistance to fusarium head blight [caused mainly by Fusarium graminearum Schwabe; teleomorph Gibberella zeae (Schweinitz) Petch].

Breeder seed will be maintained by the Seedstocks Project, Agric. Exp. Stn., North Dakota State Univ., Fargo, ND 58105-5051. Ben is protected under the U.S. Plant Variety Protection Act for Foundation, Registered, and Certified seed classes (PVP Certificate no. 9700089).

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References and Notes
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Registration of 'Georgia Bold' peanut

'Georgia Bold' (Reg. no. CV-60, PI 601980) is a new, large-seeded runner market type peanut (Arachis hypogaea L. subsp. hypogaea var. hypogaea) cultivar that was released by the Georgia Agricultural Experiment Stations in 1997. It was developed at the University of Georgia, Coastal Plain Experiment Station. Georgia Bold originated from a backcross 'Southern Runner'/ 'Sunbelt Runner'/Sunbelt Runner (2,3) made in 1986. Pedigree selection was practiced within the BC1F2, BC1F3, and BC1F4 populations, and performance testing began in the BC1F4.6 generation with the advanced pure-line selection GA 921302.

Georgia Bold has moderate resistance to tomato spotted wilt virus (TSWV). It is unique from other runner-type peanut cultivars in having a combination of larger seed, distinctively dark green foliage, spreading runner growth habit, and medium maturity. In 30 tests conducted at multiple locations in the southeastern USA from 1992 through 1996, Georgia Bold was found to be significantly higher in yield and dollar value by >15% over the long-term check cultivar Florunner (4). It also resulted in a significantly higher grade percentage of total sound mature kernels (77 vs. 75%) than Florunner.

Georgia Bold has significantly larger seed size than Florunner for both seed weight (64 vs. 58 g 100-g) and percentage of extra-large kernels (30 vs. 15%). The larger seed size of Georgia Bold compared to Florunner has been very consistent across years and locations. Georgia Bold also has a greater proportion of normal-shaped pods than Florunner, similar to 'Georgia Green' (1). Georgia Bold is comparable to Florunner in maturity, protein content, oil content, and flavor, but it has a slightly higher oleic to linoleic fatty acid ratio (2.1 vs. 1.7).

U.S. plant variety protection (PVP Certificate no. 9800041) for Georgia Bold is pending. Breeder seed of Georgia Bold will be maintained by the Georgia Coastal Plain Exp. Stn. at Tifton. Foundation seed stock will be available from the Georgia Seed Development Commission, 2420 S. Milledge Ave., Athens, GA 30605. Limited samples of Georgia Bold for research purposes are available upon request from the corresponding author for at least 5 yr.