in India as ICGV 87128 (5). TG 2E is an early-maturing breeding line developed at the Bhabha Atomic Research Center, Trombay, Bombay, India, from a cross of Dwarf Mutant with TG 3 (6). ICGV 86015 was bred following the bulk pedigree method. In the F2 generation, selected phenotypically similar plants were bulked together at harvest and the first selected bulk was designated as B1. The bulk was again grown and the process of bulking of selected phenotypically similar plants was repeated until the F3 generation, when the selected bulk was phenotypically homogeneous. The pedigree of ICGV 86015 is ICGS 44/TG 2E-B2-B3-B4-B5-B6.

ICGV 86015 has performed well across many countries. In Vietnam, it produced 2.0 to 2.8 t pods ha−1, outyielding the local control cultivar Giay by 17 to 25%. In Pakistan, it averaged 18% more pod yield than the local cultivar Banki, which averaged 1.36 t ha−1 of pod yield in 10 trials during 1985 to 1990. In India, ICGV 86015 averaged 15% more pod yield than the popular cultivar JL 24, which produced an average pod yield of 1.70 t ha−1 in 31 multilocal test evaluations during the period from 1984 to 1988. In Nepal, it yielded an average 2.67 t ha−1 of pods, 57% more than ‘B 4’ in 51 sets of farmers’ field trials. In the international trials organized by ICRISAT, ICGV 86015 had a pod yield of 2.93 t ha−1 in Bangladesh, 3.18 t ha−1 in Sri Lanka, 2.95 t ha−1 in the Philippines, 2.69 t ha−1 in Thailand, 2.20 t ha−1 in Mozambique, 3.76 t ha−1 in Haiti, 3.32 t ha−1 in Gabon, and 4.29 t ha−1 in Ghana. In these countries, ICGV 86015 produced 15 to 66% more pod yield than the best control cultivar in each respective country.

In the rainy season at ICRISAT Asia Center, ICGV 86015 matures in 100 to 105 days after planting (DAP), taking 15 to 20 d less than the medium-maturity cultivars. In Pakistan, it matures in 120 to 130 DAP, taking 50 to 60 d less than the local cultivar Banki. In Vietnam, it matures in 92 to 98 d in the rainy or summer–autumn season and in 88 to 93 d in the winter–spring season, similar to that of the local control cultivars Giay and Ly. In other countries its maturity ranges from 85 d in Ghana to 134 d in Mozambique.

At ICRISAT Asia Center, ICGV 86015 has erect growth habit, with sequential branching and elliptical dark green, medium-sized leaves (2). The number of primary branches ranges between 4 and 8, and of secondary branches between 0 and 4. Its main stem is approximately 22 cm long with a canopy width of approximately 43 cm. Its pods are mainly two-seeded, small to medium in size (26 mm average length, 13 mm average breadth) with no or slight beak and constriction, and smooth to slightly reticulated. It has 69% mean content. Its seeds are tan in color, weigh 48 g 100 seed−1, and contain 480 g kg−1 oil and 240 g kg−1 protein.

Breeder seed of ICGV 86015 is maintained by the Genetic Resources Division, ICRISAT Asia Center. Limited quantities of seed are available upon request. Seeds of ICGV 86015 are also deposited at the National Seed Storage Laboratory, 1111 Mason St., Fort Collins, CO 80521-4500.


References and Notes


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Registration of KY 83C-16-2 Wheat Germplasm

KY 83C-16-2 (Reg. no. GP-424, PI 568667) is a soft red winter wheat (Triticum aestivum L.) developed by the Kentucky Agricultural Experiment Station, and released in 1994. KY 83C-16-2 was derived from a single head selection in the F2 generation of the cross IN65309C1-182-3/IL 77-2756//IN65309Cl-182-3/’Florida 302’. A combination of pedigree and bulk selection methods were used in subsequent generations. Breeder seed consisted of the bulk of 58 F10 head rows. KY 83C-16-2 was tested in the state variety trial at seven locations in Kentucky from 1991 to 1994 and in the Uniform Eastern Soft Red Winter Wheat Nursery from 1993 to 1994. Grain yield has averaged 105% of ‘Cardinal’ and 98% of ‘Clark’. Test weight of KY 83C-16-2 was good, averaging ±102% of Clark. In 1994, KY 83C-16-2 was increased for possible cultivar release. While exhibiting outstanding yield potential in certain environments, its yield performance was more erratic than desired in a cultivar.

KY 83C-16-2 should provide useful germplasm for breeders in the eastern wheat region because of its combination of excellent winterhardiness, short stature and lodging resistance, superior test weight and good overall disease resistance. KY 83C-16-2 has excellent resistance to powdery mildew [caused by Erysiphe graminis (DC.) f. sp. tritici ‘Em. Marchal’], and septoria leaf blotch [caused by Septoria tritici Roberge ex Desmaz.]. KY 83C-16-2 is moderately resistant to glume blotch [caused by Phaeosphaeria nodorum (E. Müller) Hedjaroude], and moderately susceptible to leaf rust (caused by Puccinia recondita Roberge ex Desmaz. f. sp. tritici Eriks. & E. Henn.). KY 83C-16-2 is susceptible to all biotypes of the Hessian fly [Mayetiola destructor (Say)].

KY 83C-16-2 is a white-chaffed, awnletted soft red winter wheat with compact spikes and intermediate size kernels. It is late maturing, with a heading date equivalent to that of Cardinal and 5 d later than Clark. KY 83C-16-2 is similar in height to ‘Saluda’, with excellent straw strength and lodging resistance. Winterhardiness of KY 83C-16-2 is excellent, equivalent to that of ‘2510’.

The breeding research that generated this germplasm was supported in part by the Kentucky Small Grain Growers Association–Kentucky Small Grain Promotion Council. Seed will be maintained by the Kentucky Agricultural Experiment Station. Small quantities of seed are available upon request from the corresponding author.

D. A. Van Sanford,* W. L. Pearce, C. S. Swanson, C. R. Tutt, L. J. Tomes, and D. E. Hershman (1)