Registration of 'CF461' Soybean

'CF461' soybean [Glycine max (L.) Merr.] (Reg. no. CV-343, PI 590932) was developed by the Kentucky Agricultural Experiment Station. It was released in 1995 because of its superiority in seed yield in both full-season and double-crop plantings compared with the public cultivars of similar maturity most widely grown in Kentucky.

'CF461' originated as an F4 plant selection from the cross Asgrow 'A4595' × DeKalb Pfizer 'CX415'. The cross was made in the greenhouse in January 1986, and the F1 plants were grown at the Kentucky Agricultural Experiment Station at Lexington in summer 1986. The progeny were advanced by modified single-seed descent for two generations at the Continuous Crop Improvement Company in Belize City, Belize, Central America. The F2 plant was selected based on maturity at Lexington in 1987. The F2-derived line was evaluated in Kentucky from 1988 through 1994 and in the Uniform Soybean Tests Northern States (Group IV) in 1991 through 1994 (2) under the designation KY88-5037.

'CF461' is an indeterminate Maturity Group IV cultivar (relative maturity 4.6) that matures at the same time as 'KS4694' (2). Its latitude of adaptation for full-season production is about 36° to 40° N. Mature plants of 'CF461' are 12 cm taller than those of 'KS4694', and they lodge slightly more. Plants of 'CF461' have white flowers, tawny pubescence, and tan pods. Seeds are yellow, with black hilum and intermediate seed coat luster; they have positive seed peroxidase activity. Seed size is 10% smaller than that of 'KS4694'. 'CF461' has acceptable seed protein and oil concentrations: ≈410 g kg⁻¹ protein and ≈210 g kg⁻¹ oil on a dry weight basis. Compared with 'KS4694', seed yield of 'CF461' was 3% higher in 52 regional tests and 8% higher in 7 double-crop tests in Kentucky and Virginia (1, 2, 3).

'CF461' is resistant to Races 1 and 7 of phytophthora rot (2) caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdermann. It is susceptible to the soybean cyst nematode (Heterodera glycines Ichnohe) and to sudden death syndrome [caused by Fusarium solani (Mart.) Sacc., Type A]. U.S. plant variety protection has been applied for, specifying that seed be sold by variety name only as a class of certified seed. Classes of seed production are limited to Breeder, Foundation and Certified. Breeder seed will be maintained by the Kentucky Foundation Seed Project, Kentucky Agricultural Experiment Station, Lexington, KY 40546-0091. Small quantities of seed for research and breeding purposes may be obtained from the author for at least 5 yr. Foundation seed was distributed in 1995 with the marketing rights for 'CF461' licensed to Caverndale Farms, 1921 Bluegrass Rd., Danville, KY 40422.


References and Notes

4. Dep. of Agronomy, Univ. of Kentucky, Lexington, KY 40546. Research supported in part by a grant from the Kentucky Soybean Promotion board. Published as Paper no. 95-06-118 with the approval of the director of the Kentucky Agric. Exp. Stn. Registration by CSSA. Accepted 31 Dec. 1995. *Corresponding author (agr044@ukcolu.uky.edu.).

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Registration of 'CF492' Soybean

'CF492' soybean [Glycine max (L.) Merr.] (Reg. no. CV-342, PI 590931) was developed by the Kentucky Agricultural Experiment Station. It was released in 1995 because it has soybean mosaic virus resistance with earlier maturity than the currently available soybean mosaic virus resistant cultivars most widely grown in Kentucky. It also has high productivity in full-season and double-crop plantings.

'CF492' originated as an F4 plant selection from the cross K1099 × 'Hutcheson' (2). K1099 is a selection from K1022 × 'Essex' (7). K1022 is a selection from 'Williams' (1) × 'Columbus' (5). The cross was made in the greenhouse in January 1986, and the F1 plants were grown at the Kentucky Agricultural Experiment Station at Lexington in summer 1986. The progeny were advanced by modified single-seed descent for two generations at the Continuous Crop Improvement Company in Belize City, Belize, Central America. The F3 plant was selected based on maturity at Lexington in 1987. The F2-derived line was evaluated in Kentucky from 1988 through 1994 and in the Uniform Soybean Tests Southern States (Group IVS) in 1991 through 1994 (4) under the designation KY88-4080. Resistance to soybean mosaic virus was evaluated under natural infection in the field at Lexington in 1991 and 1993 and in the greenhouse using artificial inoculation with strain G2 during the 1993–1994 winter. 'CF492' is a determinate Maturity Group IV cultivar (relative maturity 4.9) that matures 3 d earlier than 'Manokin' (4). Its latitude of adaptation for full-season production is about 35° to 39° N. Mature plants of 'CF492' are 12 cm shorter than those of Manokin, and they lodge less. Plants of 'CF492' have white flowers, gray pubescence, and tan pods. Seeds are yellow, with buff hilum and dull seed coat; they have low seed peroxidase activity. Seed size is similar to that of Manokin. 'CF492' has acceptable seed protein and oil concentrations: ≈410 g kg⁻¹ protein and ≈210 g kg⁻¹ oil on a dry weight basis. Mean seed yields of 'CF492' and Manokin have been similar in nearly 100 regional and state comparisons (4, 6, 8).

'CF492' is resistant to strain G2 of soybean mosaic virus. Because its resistance is assumed to be due to allele Resv from Hutcheson, 'CF492' should be resistant to strains G1 and G3 of soybean mosaic virus (3). Evaluations in the Uniform Tests—Southern States have shown 'CF492' to be resistant to southern stem canker [caused by Diaporthe phaseolorum (Cooke & Ellis) Sacc., f. sp. meridionalis Morgan-Jones (4)]. 'CF492' is susceptible to phytophthora rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdermann), the soybean cyst nematode (Heterodera glycines Ichnohe), and sudden death syndrome (caused by Fusarium solani (Mart.) Sacc., Type A).

One U.S. plant variety protection has been applied for, specifying that seed be sold by variety name only as a class of certified seed. Classes of seed production are limited to Breeder, Foundation and Certified. Breeder seed will be maintained by the Kentucky Foundation Seed Project, Kentucky Agricultural Experiment Station, Lexington, KY 40546-0091. Small quantities of seed for research and breeding purposes may be obtained from the author for at least 5 yr. Foundation seed was distributed in 1995 with the marketing rights for 'CF492' licensed to Caverndale Farms, 1921 Bluegrass Rd., Danville, KY 40422.

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