Registration of 'Ohio FG1' Soybean

'Ohio FG1' soybean [Glycine max (L.) Merr.] (Reg. no. CV-344, PI 584469) was developed by the Ohio Agricultural Research and Development Center of The Ohio State University (OARDC-OSU). It was released 1 Aug. 1994 as a specialty cultivar for production of tofu and other soy foods.

Ohio FG1 is an F_4-derived line, originally designated HS90-3508, from the cross 'LS301' × HS84-6247 (2). The cross was made in the summer 1987 at Columbus, OH. The parent line HS84-6247 derives from 'Zane' × HW79149 (5,6). Ohio FG1 was developed by early-generation testing. The F_2-derived line HS88-8318 was tested in Ohio from 1988 to 1990. Ohio FG1, which derived from an F_4 plant of HS88-8318, was tested in multiple Ohio locations from 1991 to 1994 (4).

Ohio FG1 has purple flowers, gray pubescence, brown pods, and dull yellow seedcoats with yellow hila. It is a Maturity Group III (relative maturity 3.2) indeterminate cultivar and is generally adapted as a full-season cultivar from 41° to 43° N lat. In Ohio tests (1991–1994), seed yield of Ohio FG1 was 15% greater than 'Vinton 81' (1), a widely grown food-grade cultivar. Ohio FG1 yielded 9% less than the grain-type cultivar Resnik (3). Compared with Vinton 81, Ohio FG1 had 9 mg seed^{-1} greater seed weight, but 10 g kg^{-1} lower seed protein content. Lodging resistance of Ohio FG1 was similar to that of Vinton 81. Seed of Ohio FG1 produced soymilk with a solids content similar to that of Vinton 81.

Ohio FG1 has a gene, derived from PI 82263-2, for race-specific resistance to Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann. An allelism test revealed that this gene, which confers resistance to Races 1, 3, 4, and 25 but not Race 7, is at the Rps3 locus. Ohio FG1 is susceptible to brown stem rot [caused by Phialophora gregata (Allington & D.W. Chamberlain) W. Gams].

Breeder seed of Ohio FG1 will be maintained by OARDC-OSU with the cooperation of Ohio Foundation Seeds. A small sample of seed for research purposes can be obtained from the corresponding author. Protection for Ohio FG1 under the U.S. Plant Variety Protection Act is pending.


References and Notes

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