Registration of ‘Ina’ Soybean

‘Ina’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-402, PI 606749) was developed by the Illinois Agricultural Experiment Station at the University of Illinois. It was released in August 1998 because of its resistance to the soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) derived from PI 437654 through the cultivar Hartwig (1) and higher yield compared with SCN-resistant cultivars of similar maturity. The name Ina was selected to represent the area where SCN is a problem in Illinois.

Ina originated as an F3–plant selection from the cross ‘Jack’ × Hartwig made at the Missouri Agricultural Experiment Station (1,3). The cross was made in the field in the summer of 1991 and the F2 generation was grown in Puerto Rico during the winter of 1991–1992. The F3 generation was grown and harvested as a bulk at Urbana, IL, in the summer of 1992. In the greenhouse during the winter of 1994, progeny from single F3 plants selected in the summer of 1993 were evaluated for resistance to Races 3 and 4 of soybean cyst nematode. The F4 generation was grown as plant rows in 1994. Single plant rows were selected, composited, and evaluated in replicated yield trials in Illinois, 1995 through 1998. Ina was evaluated as LN94-10527 for the preliminary SCN IV Test in 1996 and in Uniform SCN IV Test in 1997 and 1998 of the Northern Regional Soybean Cyst Nematode Test, 1998 (2) and in the Uniform Northern Regional Test, 1998 (5).

Ina is an indeterminate line classified as Group IV maturity (relative maturity 4.5) maturing 3 d later than ‘Stressland’ and 1 d later than ‘Mustang’ (4). Compared with Mustang at eight locations without SCN, Ina was 6% higher in seed yield, 8 cm taller, and 19 g kg\(^{-1}\) lower seed protein (405 vs. 424 g kg\(^{-1}\)). At 23 SCN-infested locations, seed yield of Ina was equal to Mustang.

Ina has white flowers, gray pubescence, brown pods at maturity, and dull yellow seeds with buff hila. It may have up to 2% other types. Ina is susceptible to phytophthora rot (Races 1, 3, 4, and 7) (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann), brown stem rot (caused by Phialophora gregata (Allington & D.W. Chamberlain) W. Gams), and sudden death syndrome [caused by Fusarium solani (Mart.) Sacc.]. From greenhouse evaluations, Ina is resistant to SCN Races 1, 2, 3, and 5, moderately susceptible to Race 4, and moderately resistant to Race 14.

Seed production is restricted to Foundation and Certified classes beyond Breeder seed. Foundation seed of Ina will be available to qualified certified seed producers in Indiana and Illinois for 1999 planting. A research and development fee of $0.70 per 50-pound unit (22.7 kg) of Certified seed will be collected. A small sample of seed of Ina may be obtained from the corresponding author for research purposes for at least five years.


References and Notes


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Registration of ‘Rend’ Soybean

‘Rend’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-401, PI 606748) was developed by the Illinois Agricultural Experiment Station at the University of Illinois and was released in August 1998. It was released because of its resistance to the soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) derived from PI 88788 and higher yield compared with SCN-resistant cultivars of similar maturity.

Rend is an F2–plant selection from the cross ‘Jack’ × ‘Resnik’ made at the Illinois Agric. Exp. Stn (2,3). The cross was made in the field in the summer of 1989, and the F3 generation grown in the field in 1990. The F2 and F3 generations were advanced by single-pod bulk method in Puerto Rico during the winter of 1990–1991 and the F4 generation was grown at Urbana in the summer of 1991. In the greenhouse during the winter of 1991–1992, progeny from single plants selected in the summer of 1991 were evaluated for resistance to Races 3 and 4 of SCN and resistance to Races 1 and 3 of phytophthora rot [caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann]. The F3 generation was grown as 1-m plant rows in 1992. Single-plant rows were selected, composited, and evaluated in replicated yield trials in Illinois, 1994 through 1997. Rend was evaluated as LN92-10725 in the Preliminary SCN IV Test in 1995, in the Uniform SCN IV Test in 1996 to 1998 of the Northern Regional Soybean Cyst Nematode Test, 1998 (1), and in the Uniform Northern Regional Test, 1998 (5).

Rend is an indeterminate line classified as Group IV maturity (relative maturity 4.4) maturing 1 d later than ‘Stressland’ and 1 d earlier than ‘Mustang’ (4). Compared with Mustang at eight locations without SCN, Rend was 11% higher in seed yield, and 6 g kg\(^{-1}\) units higher protein (424 vs. 430 g kg\(^{-1}\)). At 23 SCN-infested locations, seed yield of Rend was 2% higher than Mustang.

Rend has white flowers, gray pubescence, brown pods at maturity, and dull yellow seeds with buff hila. It may have up to 2% other plant and seed types. Rend is susceptible to phytophthora rot (Races 1, 3, 4, and 7), brown stem rot (caused by Phialophora gregata (Allington & D.W. Chamberlain) W. Gams), and sudden death syndrome [caused by Fusarium solani (Mart.) Sacc.]. When evaluated against SCN in the greenhouse, Rend is resistant to Races 2, 3, 4, 5, and 14 and moderately resistant to Race 1.

Seed production is restricted to Foundation and Certified classes beyond Breeder seed. Foundation seed of Rend will be available to qualified certified seed producers in Illinois for 1999 planting. A research and development fee of $0.70 per 50-pound unit (22.7 kg) of Certified seed will be collected. A small sample of seed of Rend may be obtained from the corresponding author for research purposes for at least five years.


References and Notes