REGISTRATION OF ‘AVERY’ SOYBEAN

‘AVERY’ soybean (Glycine max L. Merr.) (Reg. no. 214) (PI 518663) was developed by the Missouri Agricultural Experiment Station and released jointly by the Missouri, Maryland, and Virginia Agricultural Experiment Stations and the USDA in July 1987. Avery was selected from the cross ‘Bedford’ × ‘Crawford’. Bedford (2) is a soybean cyst nematode (SCN) races 3 and 4 resistant cultivar in Maturity Group V with determinate growth habit, whereas Crawford (3) is in Maturity Group IV and is an indeterminate cultivar. Early generation selection and testing were done at the Delta Center of the University of Missouri at Portageville, MO. Individual F₁ plants of the cross were evaluated in the greenhouse for resistance to races 3 and 4 of SCN. The resistant lines were further evaluated in the cyst nematode nursery at the Rhodes Farm, near Clarkton, MO. The progeny of an F₁ plant was bulked for seed yield evaluation. Avery was evaluated under the designation ST94-4259 in the Uniform Soybean Test 4 South from 1982 through 1985. Avery was also evaluated in the Regional SCN 4 tests for 3 yr (1984 through 1986) and compared with, among other cultivars, ‘Douglas’, ‘Sparks’, ‘Egyptian’, and ‘Franklin’.

The seed yield of Avery equaled that of Douglas and Pershing in the absence of SCN. In SCN infested land, Avery yielded more than the susceptible cultivars Douglas and Sparks and somewhat better than SCN resistant cultivars Franklin and Egyptian. When planted late (in the third and fourth weeks of June) after wheat (Triticum aestivum L.) at Portageville, MO, Avery yielded slightly better than ‘Forrest’ (1) or Bedford. It is highly resistant to races 3 and 4 of the soybean cyst nematode (Heterodera glycines Icinohe) and moderately resistant to root-knot nematode (Meloidogyne incognita). Avery is also resistant to bacterial pustule (incited by Xanthomonas phascolii E. F. Smith). Avery is a late Maturity Group IV cultivar with indeterminate growth habit. It has white flowers, tawny pubescence and brown pod walls. The seeds of Avery are yellow with black hilum. Avery matures 8 to 10 d later than Douglas. It is a tall cultivar and has a tendency to lodge when growth is excessive.

The Missouri Agricultural Experiment Station will be responsible for maintaining breeder seed. The seed will be maintained as one generation each of breeder, foundation, registered, and certified seed. Application for plant variety protection is being submitted.

S. C. Anand* and J. G. Shannon (4)

References and Notes


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REGISTRATION OF ‘HUTCHESON’ SOYBEAN

‘HUTCHESON’ soybean [Glycine max (L.) Merr.] (Reg. no. 215) (PI 518664) was developed by the Virginia Agricultural Experiment Station and was released jointly in 1987 by The Virginia, Alabama, Georgia, Kansas, Missouri, and Tennessee Agricultural Experiment Stations and the North Carolina Agricultural Research Service. It was released because of its high productivity in both full season and double crop plantings and its resistance to soybean mosaic, peanut mottle, and peanut stunt viruses.

Hutcheson originated as an F₁ selection from the cross ‘V68-1034’ × ‘Essex’. The cross was made and advanced in bulk to the F₂ generation at the Eastern Virginia Agricultural Experiment Station, Warsaw. V68-1034 was a selection from the cross ‘York’ × PI 71506. Reaction to the three viruses was determined in the field at Blacksburg, VA. Plants were inoculated with viruses by an airbrush method (1) about 3 wk after planting and observed for symptoms throughout the growing season.

Hutcheson was first evaluated and selected for its potential in double crop plantings. It was evaluated as experimental line V78-184 in the Southern Regional Uniform Group 5 test from 1984 to 1986 where it exceeded the seed yield of each of the check cultivars, ‘Essex’ and ‘Forrest’, by 12%. In the Virginia cultivar testing program from 1984 through 1986, Hutcheson exceeded the yields of Essex by 6% and 10% in full season and double crop plantings, respectively. It is widely adapted, but appears best adapted to the area between 34 and 38 N lat, from the Atlantic Coast to the Mississippi River.

Hutcheson is a mid-Maturity Group V determinate cultivar that matures 4 to 5 d later than Essex. It has white flowers, very pubescent, and tan pod walls. Lodging scores are similar to those of Essex. Mature plants average 8 cm taller than Essex. Seeds of Hutcheson have yellow cotyledons with dull yellow seedcoats and buff hilum. Compared to Essex, average seed quality scores of Hutcheson are slightly better and seeds are about 1.5 mg heavier. Seed protein content is less than that of Essex and similar to Forrest, oil content is similar to that of Essex and Forrest.

Hutcheson is resistant to bacterial pustule, incited by Xanthomonas campestris pv. phaseoli (Smith) Dye syn. X. phaseoli (E. F. Smith) Dows. var. sojensis (Hedges) Starck & Burkh., soybean mosaic virus, peanut mottle virus, and peanut stunt virus. Reactions of Hutcheson to the organisms causing downy mildew [Peronospora manshurica (Naum.) Syd. ex Gaum.] and purple seed stain [Cercospora kikuchii (T. Matsu. and Tomoyasu) Gardner] are similar to those of Essex. Hutcheson is susceptible to the soybean cyst nematode (Heterodera glycines Icinohe) and root-knot nematodes (Meloidogyne spp.).

Foundation seed will be produced and distributed by the Virginia Crop Improvement Association Foundation Seed Farm, P.O. Box 78, Mt. Holly, VA 22524. The Virginia Agricultural Experiment Station will be responsible for maintenance of breeder seed.

G. R. Buss, H. M. Camper, Jr., and C. W. Roane (2)

References and Notes