Registration of ‘Manokin’ Soybean

‘Manokin’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-347, PI 559932) was developed by the Maryland Agricultural Experiment Station. It was jointly released in 1991 with the Arkansas, Missouri, Oklahoma, and Virginia Agricultural Experiment Stations. Manokin was released because of its superior yield compared with cultivars of similar maturity and its resistance to soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) derived from Peking.

Manokin originated as an F₄-derived plant selection from the cross L70L-3048 x D74-7824. L70L-3048 is a selection from the cross L.1.5 (‘Wayne’ Rps) x D64-3146 made at the Univ. of Illinois (2). D64-3146 was a selection from a backcross of D49-24915 (sister line of ‘Lee’) x ‘Hawkeye’ made at the USDA station in Stoneville, MS (6,8). The other parent of Manokin, D74-7824, was a selection from a cross ‘Forrest’ x D70-3001 (4) made at Stoneville. D70-3001 is of the same parentage as ‘Centennial’ (5).

The original cross to produce Manokin was made at the Wye Research and Education Center, Queenstown, MD, during the summer of 1980. The F₁ plants were grown in the University of Maryland greenhouse complex in College Park, MD, to produce F₂ seeds. The F₂ progeny were advanced to the F₄ generation by single-seed descent in Maryland and Puerto Rico. Manokin was evaluated as strain Md 83-5008 in 1984-1990 Maryland tests, in 1985 mid-Atlantic tests, and Uniform Soybean Tests—Southern States in 1986 (Preliminary IV-S) and 1987-1990 (Uniform IV-S).

Manokin is a late Maturity Group IV (relative maturity 4.9) determinate cultivar. In Maryland, Manokin matures in 136 d, which is about 1 d later than ‘Stafford’ (3) and 2 d later than ‘Avery’ (1). Manokin is similar to Avery in SCN resistance. When compared with Avery at noninfested Maryland locations (7), Manokin had 14% higher seed yield, 26 mg seed⁻¹ lower seed weight, 0.4 percentage points higher seed protein, and 0.4 percentage points lower seed oil. Plants of Manokin are 40 cm shorter than Avery, but have a similar lodging score. At SCN-infested sites in Maryland, Manokin has exceeded the yield of Avery by 41%. Its yield advantage is most pronounced in fields infested with SCN Race 1.

Manokin was selected for its resistance to SCN. It has resistance to Races 1 and 3, which are the most prevalent SCN races in Maryland. Manokin also has moderate levels of resistance to root-knot nematodes, including the species Meloidogyne arenaria (Neal) Chitwood and M. incognita (Kofold & White) Chitwood. Manokin has resistance to Race 1 of Phytophthora sojae (°M. J. Kaufmann & J. W. Gerdemann and to stem canker [caused by Diaporthe phaseolorum (Cooke & Ellis) Sacc. f. sp. meridionalis Morgan-Jones] and is moderately resistant to sudden death syndrome [caused by Fusarium solani (Mart.) Sacc.]. Manokin does not exhibit any resistance to foliar-feeding insects, but does have a level of salt tolerance equivalent to the tolerance found in the cultivar Lee.

Plants of Manokin have white flowers, tawny pubescence, and tan pods. Mature seed have yellow cotyledons, dull yellow seed coats, and black hila.

Breeder seed of Manokin was increased in 1990 by the Maryland Agricultural Experiment Station. Foundation seed was produced in 1991 and 1992 by the Maryland Crop Improvement Association and cooperating states. Foundation seed of Manokin can contain up to 0.25% off-types for flower color, hilum color, and pubescence color. Breeder seed will be maintained by the Maryland Agricultural Experiment Station. The station has been awarded a certificate of protection (No. 9200075) from the U.S. Plant Variety Protection Office for Manokin, and seed of Manokin may be sold by cultivar name only as a class of certified seed. A small sample of seed of Manokin may be obtained for research purposes for at least 5 yr from the corresponding author.

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References and Notes
9. W.J. Kenworthy, Dep. of Agronomy, J.G. Kanzres, L.R. Krusberg, S. Sardaneli, Dep. of Plant Biology, Univ. of Maryland, College Park, MD 20742. Scientific Article no. A7797, Contribution no. 9119 from the Maryland Agric. Exp. Sm. Financial support by the Maryland Soybean Board and the Mary land Crop Improvement Assoc. is gratefull acknowledged. Registration by CSSA. Accepted 29 Feb 1996. *Corresponding author (Email: wk7@email.umd.edu).

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REGISTRATION OF GERMPLASM

ILL 5582 lentil (Lens culinaris Medikus) (Reg. no. GP-5, PI 592997) was developed and released by the International Center for Agricultural Research in the Dry Areas (ICARDA) at Aleppo, Syria. ILL 5582 has good standing ability and yield and was released in 1987 as ‘Elidib 1’ in Syria, in 1990 as ‘Jordan 3’ in Jordan, and as ‘El Safsaf 3’ in Libya, and as ‘Baraka’ in Iraq in 1993.

ILL 5582 is a single-plant selection 78S26002 made by ICARDA at Tel Hadya, Syria, in 1978 from landrace NEL 8 collected in Amman, Jordan, by the Arid Land Agriculture Development Program of the Ford Foundation in 1972. It was entered into the ICARDA germplasm collection as ILL 5582 in 1984.

Hand harvest is a major constraint to lentil production in North Africa and West Asia. Percentage losses in seed and straw yields from harvest with a double-knife mower were lower for ILL 5582 than for the local check, because of its reduced lodging (1,3). The standing ability of ILL 5582 was 1.9 (±0.1), compared with 2.4 for the local check over 13 on-farm trials in Syria from the 1982–1983 to the 1984–1985 seasons, with lodging scored on a scale of 1 to 5 (where 1 = no plants lodged and 5 = more than 75% plants lodged). The improved standing ability of ILL 5582 in comparison with the local check was reconfirmed in the 1986–1987 and 1987–1988 seasons at ICARDA Tel Hadya. In trials in Syria, ILL 5582 gave an average seed yield of 1049 kg ha⁻¹, for an increase of 20% compared with the local check, which produced 877 kg ha⁻¹.

In the Mediterranean environment, a high rate of dry matter accumulation, manifested as early vigor, has been closely related